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The Reorganisation of Industry Series. II.

SOME PROBLEMS OF URBAN AND RURAL INDUSTRY.

PAPERS
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With Criticisms.

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PREFATORY NOTE.

THE success of the Conference held at Oxford under the auspices of Ruskin College in July, 1916, and the extensive demand for the published Report of its proceedings, seemed to justify the holding of a second conference at Bradford; and, as it is hoped to arrange for a number of other conferences from time to time, it has been decided to issue reports in a series entitled "The Reorganisation of Industry," of which this forms the second volume.

At Oxford the wish was expressed by more than one delegate that Rural Problems might form the subject of discussion on some future occasion, and two of the papers here printed—those by Mr. Orwin and Mr. Ashby—with the discussions to which they gave rise, are the outcome of this suggestion.

The inadequacy of British literature on "Scientific Management" and the growing importance of the subject will justify its inclusion in the programme of the Conference; and the usefulness of the discussion on Mr. Cole's paper was greatly enhanced owing to the fact that its opener is a well-known employer of labour, as those present were in this way enabled to hear the subject dealt with from the point of view of both employers and employed.

There is no need to emphasise the importance of the many problems connected with the subject of "Women in Industry," discussed in the paper by Dr. Marion Phillips.

The four papers, having been circulated beforehand amongst the delegates, were not read at the meetings, but the writers introduced their subjects by short speeches which have been here summarised instead of being printed verbatim, in order to avoid repetition.

The College, of course, does not hold itself responsible for all the views expressed, but it publishes this little book in the belief that it will be of service to those whose thoughts are already occupied with industrial reorganisation, and with the hope that it may encourage further study of the problems with which it deals.

H. SANDERSON FURNISS,
Principal of Ruskin College.

Oxford, *April*, 1917.

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SOME PROBLEMS OF URBAN AND RURAL INDUSTRY.

AN ACCOUNT OF PROCEEDINGS AT THE CONFERENCE OF WORKING CLASS ASSOCIATIONS HELD IN BRADFORD ON MARCH 16th AND 17th, 1917.

(Notes taken by E. T. Hunt, Oxford.)

FIRST SESSION.

The Rt. Hon. C. W. Bowerman, M.P. (Chairman of the Council of Ruskin College), having been detained on important business, one of the other members of the Council—Mr. James Bell (Secretary, Oldham Weavers' Association)—presided during the Conference.

In opening the proceedings, Mr. Bell said that the Executive of Ruskin College was composed entirely of representatives of Trade Unions, the Co-operative Societies, and the Club and Institute Union. On their behalf he welcomed the delegates, and said that the Council thought it desirous, even during the war, that something should be done to keep the College in touch with the working-class movement. Some time ago there was a similar conference held in Oxford, and those who had read the small book reporting that conference would recognise that their efforts in Bradford were likely to do good. The Council wanted the workers to have the best possible education—they did not want to make them Socialists, or any other "ists." If they became Socialists as a result of education, well and good; but the main point was to build up a well-educated movement, so that the workers could have a chance of working out their own salvation.

SCIENTIFIC MANAGEMENT.

By G. D. H. COLE, M.A.

I make no apology for confining this paper within comparatively narrow limits, or for enlarging principally on those features of 'Scientific Management' which seem to me both most immediately important and of most vital concern to labour. I should like it to be understood at the start that I am dealing not with the general questions of the application of scientific principles to industrial management, but with the more particular question of their application to human beings. I shall therefore have nothing to say of many matters which fall under the head of Scientific Management, where they do not directly and immediately affect the human element in the factory. That the application of scientific principles to industrial organisation is a good thing we can all agree in the abstract; and we can at least reach an agreement in practice where only inanimate objects are affected. The improvement of industrial research, of factory organisation, of the estimating of costs of production, of the routing of jobs, of the dovetailing of orders, and of the co-ordination between factory and factory undoubtedly call for more 'science,' and there can be no quarrel with any attempt to apply science purely in such spheres. There is a real sense in which industrial management is a science, just as there is a real sense in which political government is a science.

The advocates of the various systems which go by the name of 'Scientific Management' make, however, a far wider claim than this. For Mr. Taylor, who invented the name if not the thing, the place of 'science' in industrial management is not merely important, but all-embracing. His aim, at least, was to substitute in industry 'the government of fact and law for the rule of force and opinion.' He conceived industrial management not merely as a science, but as an exact science, furnishing an absolute and unchallengeable answer to every question, laying down natural laws with reference not simply to the machinery of the factory, but also to the behaviour, motions, tasks, and methods of remuneration of all the workers employed in it. He claimed that his system was 'democratic,' not because it established the principle of self-government by the workers in the factory, but because it made government an absolute and exact science, no less independent of the actual managers of any particular factory than of the workers employed in it.

The extreme claims of Mr. Taylor have been considerably modified by his theoretical successors, and very much more modified wherever Scientific Management has been applied in practice. Nevertheless, in so far as Scientific Management is a doctrine at all, it does rest upon the belief that industrial organisation is an exact science, and that in

the factory the government of natural law must replace the rule of force and opinion.

This view is, of course, highly controversial, and, despite Mr. Taylor's elaborate promises of the beneficent effects which his system would have upon the workers, it is, I think, a theory which Labour is not likely to accept. The central point at issue can most easily be made clear by an analogy. We are all familiar with disputes concerning the place of the expert in political government. From time to time, writers have arisen who have proclaimed that the government of men is an exact science, and that its basis and application should be determined by law and not by opinion. In all ages, from Plato to that talented French publicist, M. Emile Faguet, in our own day, such writers have challenged democracy as the denial of political science and as the 'cult of incompetence.' For the inexact and unscientific opinion of democracy they have desired to substitute the rule of knowledge by placing the expert in the seat of power. Against them, democrats have contended that, while the expert and science have their place in government, the social life of man is finally not a matter of abstract science, but a matter of positive will. They have based their conception of society upon the will of the governed, and have made the realisation of self-government their primary objective.

I do not think the advocates of Scientific Management in industry really believe in political democracy; but they are, as a rule, careful to maintain that there is no analogy between industry and politics. Democracy, they say, may be good enough in politics; but it will not do in industry. Whatever politics may be, they hold that industrial management is an exact science.

This point of view I challenge. I hold firmly that no sphere of human action or conduct can be reduced to the formulæ of an exact science. I hold that political self-government is good, not simply as ministering to 'efficiency,' but because it is self-government; and I hold that in every sphere of human action self-government is in itself good, because the greatest of man's achievements is self-government. I set out, then, from a fundamental criticism of the whole principle on which Scientific Management rests, and with an assertion that self-government is good in industry as well as in politics.

This is no denial that the expert has a place—and an important place—in industry; but it is a denial that the expert can be regarded as supreme. No less than in politics, the problem of democracy in industry is that of reconciling its own rule with an adequate recognition of the expert; but my point is that this is a problem for democracy to solve, and cannot be made a point against democracy itself.

Throughout this paper, then, I shall have primarily in mind the principle of industrial democracy, and I shall regard it as the weightiest of arguments against any system that it makes against self-government. I postulate at the outset that our ideal in industry should be that of securing self-government for the workers engaged in it; and I am not interested in arguing with those who decisively reject this principle.

'Humanitarian' arguments, based upon the effect of Scientific Management upon the 'welfare' of the workers, may be important, but they are secondary.

I cannot attempt to define Scientific Management in any more concrete terms than I have employed in speaking of the general principle behind it. As soon as we pass from its theoretical position to the practical applications of that principle, we are confronted with a vast and heterogeneous mass of proposals. From these I must merely select those with which I propose to deal. In its application to Labour, Scientific Management is based upon a 'scientific' investigation of the conditions under which work is carried on. By elaborate studies of the time taken on particular jobs or parts of jobs, and of the motions made in and necessary for the execution of such jobs, the 'scientific manager' seeks to arrive at an accurate knowledge of the 'best' conditions to be adopted in his factory. He seeks to equip himself with information in respect of every job bearing on the following, among other, points:—

(*a*) The method and amount of payment necessary to secure the lowest labour cost per unit of the product;

(*b*) The method of production, the hours and conditions of labour, the rest pauses, the amount of supervision, etc., necessary to secure the same ends.

Now, this description of the methods and aims of Scientific Management includes what many of its advocates will regard as a misrepresentation. Our object, they will say, is not fundamentally that of securing 'the lowest labour cost per unit of the product'; it is that of finding the 'best' and 'most scientific' methods of payment, hours and conditions of labour, rest pauses, amount of supervision, methods of production, etc. It is the fundamental doctrine at least of Mr. Taylor, the founder of the system, that these things go together. The 'best' and most scientific adjustments do also secure the lowest labour costs, and also make for the common advantage of all parties concerned—the profiteer, the manager, the worker, and the public.

For this claim we should not, I think, be prepared to take Mr. Taylor's word, even if those who have to apply Scientific Management in practice were purely disinterested persons. Still less can we be content to do so when we consider the conditions under which the system has to be applied. Industry to-day is owned and controlled by persons who are not, and cannot be, 'in business for their health.' Self-interest and, failing that, competition, impel them to seek the lowest labour cost without too much regard for the effect upon others. Where it pays them to manage 'scientifically,' they will do so if they have the intelligence: where it does not pay them, or they are unintelligent, they will persist with unscientific management. If all managers were perfectly intelligent, and further if Scientific Management always paid its promoters, it would no doubt be universally adopted; but this would be no proof of its beneficent effect upon the workers or the community. The 'best' for Capitalism is not necessarily the best for

Labour or the best for the community. Indeed, in practice, the capitalist's criterion of what is 'best' lies in the profit he can secure from it. This does not mean that it is necessarily bad for Labour; but it does not mean either that it is necessarily good.

We are driven back, therefore, upon a further study of the practical proposals of the advocates of Scientific Management, and upon these we must endeavour to pass judgment.

The 'scientific method' of the system, as we have seen, is based primarily upon time and motion study. The object of time-study is, by long series of experiments, to find out how long a job ought to take—that is, to establish a scientific standard time for the job or task for the worker. The object of motion-study is, by similar experiments, to find out the method of doing the job in the shortest possible time, or, to a less extent, with the least possible effort. Speaking broadly, motion-study is to determine the method to be adopted by the worker in performing the job: time-study is to determine how much he or she is to be paid for it.

Motion-study naturally takes different forms, and assumes varying degrees of importance, according to the nature of the operation. It has reached the largest proportions in purely manual operations, such as the classic instance of loading pig-iron on to a truck, or the laying of bricks, or sewing by hand in a tailoring establishment. In such cases an attempt is made to standardise the operation, so that it is performed in the least possible number of motions, or in the shortest possible time, or with the minimum of effort. These, obviously may not be compatible. The speeding-up of an operation by the elimination of useless motions may involve either more or less effort, or the number of motions may be increased while the time is diminished. The accusation has been made that in many such cases the employer gets a greater output by placing a far greater strain on the worker, who may even be worn out by overdrive and thrown on the scrap-heap like an old machine. The object of motion-study is indeed largely that of making the worker into a machine.

In the case of machine operations, the effect of motion-study may be rather different. In such a case, the machine itself, in proportion to its automatic character, dictates the actual motions to be used in working it, and motion-study is therefore likely to suggest an alteration or adaptation of the machine, sometimes such an alteration as to remove work from a skilled to a semi-skilled or unskilled category. Apart from this, however, some 'scientific managers' carefully prescribe even for skilled craftsmen the motions and methods to be employed on complex machines and operations. Here, again, then, the tendency of Scientific Management is towards standardisation of both machines and men. To this point I shall return later.

Time-study has reference mainly, though not exclusively, to methods of payment. In endeavouring to discover by experiment the standard time for a job, what the manager mainly wants to find out is how much the job will cost him in payment to the worker for doing it. Upon

time-study are based the elaborate systems of payment by results which are associated with Scientific Management. All the leading advocates of the theory have their own systems of wage payment, and all these are systems of payment by results.

Payment by results, advocated in the name of industrial efficiency, is indeed placed foremost in the programme of Scientific Management theorists. Of their system it is only a part; but since it is easily detached from the rest and possesses obvious superficial attractions for the employer, it is very often adopted without any attempt to apply 'science' to the other parts of the business. Time-study in such cases becomes almost purely a means to the fixing of wages.

There are, however, obvious reasons why time-study may be useful to the employer quite apart from payment by results. It is, indeed, perfectly compatible with a time-work system. Before estimating on a contract, the employer wants to know what the labour-cost of the job will be, and accurate study of the time taken on similar jobs in the past will clearly help him to be 'scientific' in forecasting the cost of production. There is a clear case for more science in this direction, for an important inducement to rate-cutting and speeding-up is lack of accuracy in forecasting the labour-cost of a job. Even if it is not used as a method of increasing output, or of devising 'scientific' methods of payment, time-study may be very useful to the employer.

Here, however, we are concerned with the effect produced on Labour, and we must therefore pass on to a description of the various 'efficiency' systems of payment put forward by apostles of Scientific Management. The actual systems in use are legion, both in America and in Great Britain; we shall have to content ourselves with the chief types.

The two simplest methods of paying Labour are time-work and piece-work. The employer may pay his workers in accordance with the time spent in his service, or in accordance with the output secured—at so much per hour, per day, per week, or per month, or at so much per piece, per ton, per mile, etc. It has often been pointed out that these two methods of payment have, to a great extent, a common basis: the hourly rate has reference to a more or less defined output which the employer expects from the worker, and failing which he is likely to dismiss the worker; while the piece-rate invariably has reference to a more or less defined standard of living to be attained by the worker. To say this is only to say that, on whatever basis wages are paid, they are mainly governed by the supply of, and demand for, labour.

The common basis appears more clearly in the two most simple variants of the two methods. Task-work, retaining the time basis, imposes on the worker a definite task to be performed in the time, and, if this is not done, a corresponding deduction is made from the wages. This happens only where the workers are weak and unorganised. On the other hand, wherever Trade Unionism is strong, piece-work is usually worked only on condition that a standard time rate of payment is guaranteed irrespective of output.

None of these methods is ' scientific ' enough for the advocates of Scientific Management,and the three American leaders of the movement —Taylor, Gantt, and Emerson—have all put forward methods of their own. To these methods and to the various premium bonus systems in operation in this country, we must now turn our attention.

The Taylor system, now almost extinct in its pure form, is that of the *differential piece-rate*. It is in fact a combination of task-work with a double piece-rate. First, on a basis of time-study, a task is fixed to be accomplished in a given time—say five ' pieces ' an hour. Two piece-rates are then fixed, and all workers who fall below the standard task are paid at the lower piece-rate, while all who reach or exceed the task are paid for their whole product at the higher rate. It is thus a system of rewards and punishments: the slack or the inefficient worker is not paid any guaranteed time-rate, and is moreover penalised by a low piece-rate. The quicker worker, on the other hand, is not merely paid more in proportion to output, but is paid at a higher rate per piece. The result is obvious. Between two workers of almost the same capacity, a great gulf is fixed. The worker who is below the fixed level of output is left with three possible alternatives: either to reach by overdrive the standard output, or to leave the industry, or to starve. The slow worker is either overdriven, or eliminated, or starved. Taylor assumes that he or she is eliminated; but under the conditions of unorganised or sweated industry he or she is fully as likely to be starved, especially in cases where overhead costs are light, and the employer has no special motive for desiring a high level of output from the individual worker. Indeed, it is the testimony of investigators that this is what has actually happened in some so-called ' scientific management ' shops. There is no semblance of justice in Taylor's system, which does not even remunerate the worker according to output.

Gantt's system, known as the *task and bonus system*, has been far more widely adopted. It is, in fact, an improved version of Taylor's. It also begins by fixing a standard task—say, again, five ' pieces ' an hour. It then fixes a piece price (say 2d. a ' piece ') and an hourly rate (2d. $\times 5 = 10$d.). This hourly rate is guaranteed irrespective of output; but the worker who reaches or exceeds the standard task receives a bonus (say of 30 per cent.) on the piece-price. The effect of this system can be best set out by way of a table:—

NUMBER OF PIECES MADE PER HOUR.	EARNINGS PER HOUR.	PRICE PER PIECE.
3	10d.	3.3d.
4	10d.	2.5d.
5	1s. 1d.	2.6d.
6	1s. 3.6d.	2.6d.
7	1s. 6.2d.	2.6d.

This table clearly shows certain things which the system is so devised as to conceal. In the first place, the price per piece is uniform for all

workers who reach or exceed the standard task, and in this the system resembles straight piece-work. In the second place, the guaranteed day rate is illusory, in that what is guaranteed is not a real day rate at all, but a rate lower than that of the worker who reaches, but does not exceed, the standard output. In fact, the system only differs from straight piece-work with a guaranteed day rate in one respect, that it does not guarantee a real day rate, but only a fictitious rate. In this respect it reaches by a crooked road a similar result to that which has been reached by some of the arbitration tribunals under the Munition Acts during the war, by guaranteeing to the piece-worker only a fictitious day rate lower than that of the time-worker.

The method of payment associated with the name of Harrington Emerson is far more complicated than that of either Gantt or Taylor. The Emerson system also sets a standard task and guarantees a time-rate irrespective of output. Its distinctive character lies in the detailed graduation of the *efficiency bonus* by which it rewards greater output. Under this system every range of output is graded as a degree of efficiency. The standard output as determined by time-study is treated as 100 per cent. efficiency, and every lesser output is graded as a smaller percentage of efficiency. A time-rate (say 10d.) is fixed, and this is guaranteed in all cases. At a fixed percentage of the standard efficiency (say 61 per cent.) a bonus is granted, and this bonus increases in geometrical progression as the worker approaches the standard efficiency, after which it proceeds by arithmetical progression. A table will serve to make this clear. Suppose the hourly rate guaranteed to be 10d., and the standard task five 'pieces' per hour, the table will then read:

PERCENTAGE OF STANDARD EFFICIENCY.	BONUS PER CENT.	EARNINGS PER HOUR.	PRICE PER PIECE.
60	0	10d.	3.3d.
67	½	10.05d.	3d.
73	1	10.1d.	2.8d.
76	2	10.2d.	2.6d.
79	3	10.3d.	2.6d.
82	4	10.4d.	2.5d.
85	5	10.5d.	2.47d.
90	10	11d.	2.44d.
95	15	11.5d.	2.42d.
100	20	1s.	2.40d.
101	21	1s. 0.1d.	2.39d.
105	25	1s. 0.5d.	2.38d.
110	30	1s. 1d.	2.36d.

It is clearly shown by this table that, under the Emerson system, the piece-rate slowly falls as the output increases. A time-rate is guaranteed; but, as in the Gantt system, this is a fictitious time-rate considerably below the rate paid for the standard output.

Last, but not least, comes the *premium bonus system*, which, alone among efficiency methods of payment, has a considerable hold in this

country. This system has several forms, but all are only refinements of the two simplest, to which I confine myself in this paper. Under the premium bonus system, the first step is to fix a standard time allowance for the job. The worker is guaranteed his hourly rate for the time spent on the job, and over and above the hourly rate is paid a premium calculated according to the time saved.

Of the premium bonus system there are two main varieties, known by the names of their inventors as the Halsey and the Rowan system. Under the Halsey system, the worker is paid his time rate plus a percentage (usually 30 per cent. or 50 per cent.) of the time saved.

This again can be clearly explained by a table, the hourly rate being once more supposed to be 10d., the standard allowance for the job 10 hours, and the bonus 50 per cent. of the time saved.

Hours spent on Job.	Hours Saved.	Hourly Earnings on Halsey System.	Hourly Earnings for Equal Output on Piece-work.	Equivalent Piece-work Price.*
12	-2	10d.	10d.	1s.
10	0	10d.	10d.	10d.
9	1	10.5d.	11.1d.	9½d.
8	2	11.25d.	12.5d.	9d.
7	3	12.14d.	14.2d.	8½d.
6	4	13.33d.	16.6d.	8d.

The Rowan system, for which British manufacturers have shown a marked preference, is far more ingenious. The worker is again guaranteed his time rate, and in addition is paid a bonus on the hours saved on the following principle :—

$$\text{Bonus} = \frac{\text{time saved}}{\text{time allowed}} \times \text{time taken.}$$

Thus, if ten hours is allowed for a job, and the worker does it in eight hours, he is paid his time-rate for eight hours + $\frac{2}{10}$ of 8 times his time rate.

A table comparing the Halsey and the Rowan systems will serve to show clearly wherein they differ :—

		Halsey.		Rowan.	
Hours taken.	Hours saved.	Hourly earnings.	Equivalent piece price.	Hourly earnings.	Equivalent piece price.
10	0	10d.	10d.	10d.	10d.
8	2	11.25d.	9d.	1s.	9.6d.
5	5	1s. 3d.	7.5d.	1s. 3d.	7.5d.
3	7	1s. 10.5d.	6.5d.	1s. 5d.	5.1d.
1	9	4s. 7d.	5.5d.	1s. 7d.	1.9d.

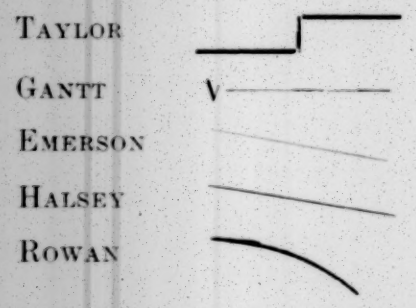
*This calculation of what the earnings of piece-work would have been assumes that the basis time under the premium system is a real and not a fictitious time. In fact, the basis time is usually lengthened to allow of a premium being earned. That is to say, it is a fictitious standard, and the comparison is made in order to show that it is such.

Thus, it will be seen, the Rowan system is more favourable to the workman when more than half the time allowed is taken for the job (*i.e.*, in ordinary cases); but as soon as the half-way point is passed, the Halsey system is immensely more favourable. Similarly till the half-way point, the cost per piece is greater to the employer under the Rowan system; but when that point is passed, the Rowan system offers him an enormous advantage.

Under the Halsey system, it is in theory possible for the workman to earn five times his time rate; under the Rowan system he can never reach double time, even if his productivity increases tenfold. It is urged by employers that the Rowan system is to be preferred, because it gives them less inducement to cut the rate when too long a time has been allowed in the original fixing of the basis. This, however, seems to be an attempt to remove temptation out of the employer's way by limiting rigidly the amount of wages a workman can earn.

Under both forms of the premium bonus system there is a piece-rate which falls sharply as the output increases. The guaranteed time-rate is, however, in this case the actual rate paid for the standard output.

A comparison of the above systems gives some curious results. The claim of the advocates of Scientific Management is that they are prepared to pay for output. 'Payments by results' is the motto inscribed upon their banners. Yet when we examine their systems, we find that nowhere is the amount of payment exactly proportionate to the work done, as in a pure piece-work system. Under Taylor's system there are two piece-rates, with a sudden leap from the one to the other when the standard output is reached. Under Gantt's system, the piece-rate falls till the standard is reached, then rises slightly and thereafter remains stationary. Under Emerson's system and under the premium bonus system, the piece-rate falls continually. The four may perhaps be represented thus:—



Now, it must be remembered that the greater the output secured by the employer in a given time from a given worker, especially a machine worker, the less are the overhead charges per unit of the product. The employer, therefore, under three of these systems secures a double advantage: for he reduces his standing charges, and at the same time pays the worker less per piece. It is difficult to see either rhyme or reason in such a method of remuneration, except from the employer's point of view. It can, indeed, only appear just to those whose minds

are obsessed with the idea of a pre-ordained standard of living for the workers which it is almost immoral for them to exceed.

A second objection to all these systems, in so far as they claim to be scientific, is that they all rest at some point upon a rate fixed by purely arbitrary methods. Mr. Taylor may claim that his system makes collective bargaining unnecessary by determining wage-rates on a basis of economic law; but the piece-rates upon which his system is based are fixed in a purely arbitrary manner. All the time-study in the world cannot show how much ought to be paid for a job: it can only show the length of time a job ought to take. Whether the hourly rate should be 10d., or 10s., or £10, no amount of time-study can decide. An hourly rate or a piece-price must be fixed or assumed before the 'scientific manager' can set his system of payment to work; and as there can be no scientific method employed in fixing such a rate, the rate is essentially a matter for bargaining on a collective basis.

Some scientific managers may object to this statement on the ground that, by a combination of time and motion-study, they can determine the varying degrees of skill, attention, etc., required for various jobs, and thereby arrive at a justly graduated scale of wage-rates. This adjustment, however, is purely relative, and assumes a standard rate or rates as already in existence. We may know that A's skill is twice as great as B's, and we may conclude that we ought to pay A twice as much as B; but this will not help us to determine how much we ought to pay either of them.

This, most advocates of the system would now admit; but it is important to make the point because it destroys, once and for all, Taylor's claim that Scientific Management does away with the need for bargaining about wages, and substitutes law for force in the determination of wage rates. It does, and can do, nothing of the sort; for it does not, and cannot, touch the question of the proper division of the product between Labour and Capital, or of the impropriety of any such division. Scientific Management does nothing to remove the need for collective bargaining and Trade Union organisation, and it is therefore of the greatest importance to look carefully at its effect upon them.

This brings us to the greatest of all the objections to 'scientific' methods of payment—that they are unintelligible to the ordinary worker. We have described above only the simplest forms of the systems advocated: and these in themselves would be enough to baffle many workers. But in practice every disciple of the masters of the movement has his own system, so that methods vary from shop to shop, from department to department, and from job to job. The result is that, in the majority of cases, the workers do not try to understand the system on which they are being paid, but simply judge it by the amount of money they receive at the end of the week. The objection to this state of affairs will be obvious to anyone who has even the smallest belief in the value of self-government. It concentrates knowledge in the hands of the expert, and leaves the governed with

only the vaguest conception of the system that controls them. This is in itself enough to condemn all methods of payment too complicated to be easily understood by the ordinary worker.

We have seen that the worker is apt to judge 'scientific' systems of payment purely by the amount whuich they enable him to earn. In so far as this is the case, the gradual fall in the piece-rate which is characteristic of such systems is concealed, and the worker is unaware that his extra effort is a source of more than proportionate profit to the employer. He may be making more money; and that is, prima facie, an argument in favour of the system.

Scientific managers have nearly always encountered opposition on the part of the workers when they have attempted to introduce these systems. But it is notorious that, when once men have got used to a thing, they are far more ready to put up with it. The innovator's main difficulty is to get his scheme fairly launched without a stoppage; once it is established, he has a fair hope of keeping it in existence, even if it is unpopular. He is therefore willing to make concessions at the start, in order to make the scheme go. Now, it is clear that in all the systems we have described, the actual earnings of the workers depend upon the point at which the standard task of Taylor and Gantt, the 100 per cent. efficiency of Harrington Emerson and the standard time allowance of the premium bonus system are fixed. Fix them liberally and high earnings will follow; illiberally, and earnings will be low.

Here again there is a flaw in the 'scientific' character of Scientific Management. Time and motion study do not and cannot decide whether the standard ought to be set on the basis of the superior worker or the ordinary worker, or on an average struck to cover all workers. They may suggest, after experiment, which method is most profitable to the employer; but they cannot easily prove this, and they certainly do not show which is the best method for the community.

In order to get his system accepted the more easily, the scientific manager may be inclined at the outset to fix a liberal standard, allowing a considerable margin for earnings over the standard rate. When his system has got into working order, the temptation to cut these rates, which he will regard as far too liberal, becomes great. It is indeed a principle laid down by advocates of the system that standard tasks, times, and prices must not be altered unless the method of manufacture is changed; but this principle, by no means always observed in the letter, is far less often observed in the spirit. It is a constant complaint of the workers, and 'impartial' investigators have borne it out, that in many cases a very slight change in the method of manufacture is made the excuse for a drastic cutting of the price for the job. Nor is this all. The method of manufacture is often changed for no other purpose than to enable the price to be cut.

Some scientific managers realise the unfairness of this, but hold that it can be met by more accurate methods of fixing the standards. Accordingly, the job is priced not as a whole, but separately for each

minute operation or process included in it, and a guarantee is given that there shall be no change in price on any process that is not altered. Thus, on a job priced at 1s., and consisting of six operations ranging from 3d. to 1d. in price, a change in process on one of these operations (price 2d.) might have been made an excuse for a drastic cut, say to 8d. for the whole job. Under the system now suggested it would only be possible to cut on the 2d. paid for the operation actually affected by the change.

This is obviously fairer, as far as it goes; but it is only capable o application to highly standardised jobs. This raises a wider question which we must now discuss.

Different systems of payment are suitable to different classes of work. There are obviously many jobs which can only be done on time-work, and these include all jobs, such as most railway work, which are not measurable in terms of output, or in which the worker has no control of his output. There are certain jobs which can be worked on piece-work even without a guaranteed day rate. A case in point is much of the work in the iron and steel industry, where, given a tonnage rate, the worker can be sure of a fairly regular level of output. If it were not for the abnormal place and similar questions, which make a minimum necessary, the same might be true of coal-hewing. In other cases, a guaranteed time-rate is absolutely necessary, because the worker cannot be sure of a regular output, or because there is no assurance that the piece-work prices will give a regular yield.

The whole range of machine operations can be divided very broadly into two classes—repetition work and individual work. On repetition work, the operative sticks to a narrow round of operations and produces constantly a more or less uniform product. On individual or general work, on the other hand, the worker has usually a wider range of operations to perform, and the product varies from day to day or from week to week, both in character and in amount. It is clearly far easier to fix a standard of output and a constant price on repetition work than on individual work. No matter how great the number of operations performed may be, if they are of a recurring character, a standard price can with a fair chance of success be fixed for them. The cotton industry, with its elaborate weaving price-lists, affords the best example of this; but the method of the weavers' list could easily be applied over a far larger range of industries than now to jobs which are measurable in terms of output.

The measurement of individual or general work is a far more complicated matter. Work of this class is usually far more skilled than repetition work, and, as the product varies continually, it is far more difficult to fix a standard price. Nevertheless, great efforts have been made by scientific managers and, in this country, by advocates of the premium bonus system, to apply their method to the widest possible range of skilled individual work. So far as the premium bonus system in this country is concerned, the result has very often been the fixing

of basis times which have no sort of scientific sanction, in much the same haphazard way as piece prices are habitually fixed.

Here and there, however, there are cases in which the method of time and motion study has been carefully applied to individual as well as to repetition work. The result in such cases is often something like this. There is an enormous difference between skilled men in their ways of doing the same job. Men set their tools differently, and use different tools for the same job, and this difference of method is clearly a constant attribute of skill. The first tendency of the scientific manager is to prescribe in detail to the skilled man how he shall do his work—what tools he shall use, and how he shall use them. A second tendency follows inevitably. On many classes of work, sub-division is accomplished, and a large part of the work is taken away from the skilled man, and passes into the category of semi-skilled or unskilled work. And, of course, when such a change takes place, the employer claims to pay for the less skilled part of the job at a lower rate. This tendency has been very manifest during the war period, and many of the most difficult disputes have arisen over it.

The tendency, then, of scientific management is not simply in the direction of 'scientific' systems of payment, but also in that of standardisation and the elimination of skill. In the storm centre, the engineering industry, its effect is to increase the amount of skilled labour required for the tool-room, while more than proportionately decreasing the skilled labour in the machine shops. In face of this tendency, which is no doubt largely inevitable, but which the war has greatly accelerated, the skilled mechanic sees himself threatened with the loss of his livelihood. The scientific manager replies that the increase of output made possible by the new methods will create so large a new demand as to absorb all the skilled labour. Even if this were true in the long run, it could hardly be expected to satisfy the skilled workman, whose economic position does not enable him to think in terms of the distant future.

There is a further tendency which arises directly out of those which we have just described. Standardisation takes the form not only of sub-division of labour within a works, but also, and increasingly, of the specialisation of works. The specialised shop or works, concentrating upon a single type of product, has long been established in America, and is now making great headway here. It is likely to make more headway after the war ; for it is clear that many big manufacturers have settled in their own minds that the future of the National Factories is to be as specialised shops under private ownership.

This brings us to a further point. The general engineering shop, in which the proportion of individual work is high, is usually making mainly for special orders, and only to a small extent for stock. The specialised shop, on the other hand, which concentrates on repetition work, makes mainly for stock. During the war the existence of an unlimited demand has, of course, produced over all industry the conditions of making for stock.

One of the most frequent complaints by workmen against ' scientific ' systems is that, by increasing the output per worker, they create unemployment. It is the opinion of many investigators of the system that the effects in this respect differ in degree in specialised and general shops. In the general shop, a system of strong inducements to a big hourly or daily output does produce unemployment, because it prevents the " nursing of work " and causes men to crowd the greatest possible output into one day or week, even if they have to stand off the next. These conditions exist also in the specialised shop, but not in the same degree, because it is possible for a shop that is making for stock to preserve a more regular level of output.

It is not, I think, generally realised what an enormous proportion of the unemployment in many industries really consists in ' standing off ' for a few days or weeks. This temporary unemployment is the worker's curse ; for it means that he bears the burden out of his wages of maintaining himself during slackness of work as part of the employer's reserve of labour. The adoption of ' scientific ' systems of payment, which give the worker an inducement to ' go all out ' irrespective of the volume of work available, undoubtedly tends to increase the amount of temporary unemployment, and this is one of the most serious criticisms that can be levelled against it—a criticism which could only be surmounted by placing the whole burden of such unemployment upon the industry itself.

Economists and employers are very apt to scout the idea that there is any truth in the workmen's claim that ' scientific ' systems of inducement to output produces unemployment ; but I think the above paragraphs show clearly one point wherein the workmen's contention is true.

Out of this long survey I can now proceed to draw together the threads of a conclusion.

In the first place, there is no essential or necessary connection between the application of scientific principles to industry and the adoption of fancy systems of payment which are unintelligible to the ordinary workman. These systems are uniformly false to their own premises, in that they do not provide for remuneration according to output or effort. They are not ' scientific,' both because science cannot determine the amount of payment that ought to be made, because science cannot show whether the standard should be based on the exceptional, the average, or the ordinary worker, and because their effect in respect of earnings depends upon the arbitrary fixing of a standard by the management, or by bargaining between the management and the workers. They are perhaps less unjust in their application to repetition than to individual jobs ; but they are also less necessary, because the more automatic the machine the less control, generally speaking, has the worker over his or her output. They are fundamentally unjust in their application to individual work, because on much work of such a class it is impossible to set an absolute and invariable standard, and also because the conditions under which such work has to be performed

often differ widely from job to job. In short, they are fundamentally unscientific, unless the science in question is purely the science of unrestrained profiteering.

Time-work on some jobs, and piece-work with a guaranteed weekly rate on others, offered all the inducements to output which ought to be afforded; and the decision on any class of work as between time-work and piece-work ought to be made by negotiation between the employers and the Trade Unions on the merits of each case. Where piece-work is adopted, more scientific systems of determining piece-prices ought to be devised; but the determination ought to be made jointly by the two sides, and the science necessary for it ought to be in the possession of both.

This brings me to my second point. Time-study, motion-study, and the other expedients of scientific management may have very beneficent results, especially in such spheres as the study of industrial fatigue and the relation of output to hours of labour. But here again, science must not be the monopoly of the management or of the employer. The Trade Unions must equip themselves with the knowledge that is required, and 'science' must become the handmaid of collective bargaining. Just as it is one thing to say that 'welfare' is desirable, and quite another to approve of 'welfare work' under the employer's control, it is one thing to desire industry to become more scientific, and quite another to accept 'Scientific Management' at the hands of the employing class. Taylor's contention that under such conditions an equal balance will be struck between the management and the workers, because both will be subject to the "rule of law," is unmitigated nonsense.

Thirdly, Scientific Management presents a number of real dangers to industrial democracy. The methods of payment it suggests are a crude appeal to individualism, and it is generally agreed among Trade Unionists that where they are adopted the morale and sense of solidarity among the workers are lowered. It sets each man's hand against other's, and inaugurates a system of cut-throat competition between worker and worker, even in the same grade. In many of its applications it may be fatal to collective bargaining and the standard rate, though this is not necessarily or universally true of all parts or aspects of it. It is most true where scientific managers adopt the device of a 'scientific' grading of labour which sub-divides the workers into very small groups, or even treats each worker individually on his merits. Against such tendencies Trade Unionism must fight. It must preserve at all cost its effective right of collective bargaining, the standard rate, and the solidarity of Labour.

Fourthly, Scientific Management tends to make more impassable the gulf between Labour and Management. This is an aspect of it which I have been compelled, for reasons of space, largely to omit from my survey; but I must refer to it shortly here. It has a new conception of foremanship, by which the foreman becomes a scientific expert, and by which the foreman of to-day is replaced by a series of

'functional foremen,' each of whom is an expert in a particular branch of the work, or a particular phase of time or motion-study. For such foremen it recommends elaborate special methods of training. In place of promotion from the ranks of the workers it would find its foremen by special selection, and train them largely away from the workshop. In this way the foremen would come to have less of the Labour and more of the employer's point of view, and would become, far more than now, a new class of dependents on Capitalism. For one who believes, like myself, that one of the next steps for Trade Unionism, in its gradual assumption of control over industry, will be to take altogether out of the employers' hands and vest in the Trade Union the appointment of foremen and the organisation of the workshop, this appears as a counter-move on the part of Capitalism to remove the foremen from the possibility of control by Labour. The way for Labour, to my thinking, is the gradual conquest of management. For this, Labour must equip itself with scientific and industrial knowledge; and, while it is doing so, it must resist any move by the employing class which will make more difficult the conquest of industrial control.

This is one of the reasons why there can be no alternative to the actual and literal restoration of Trade Union rules. These rules are the beginnings of democratic industrial legislation. They are resented by the employers as invasions of capitalist autocracy, and as outrages upon capitalistic 'competence.' The employer, on his own showing, knows how to run industry: the workman does not. If that is so, I reply that the workman must learn, and that the best way for him to do so is for him to increase his control. Let Trade Union rules be improved, by all means; but they must be improved by the Trade Unions. They must be restored because they point the way to industrial self-government.

My fifth point follows logically. The employer, I have said, on his own showing, knows how to run industry. Does he? It would seem that during the war he has been discovering very rapidly that he does not, if we can judge from the cry for reorganisation which has arisen in the employers' own ranks. There is a very wide scope indeed for scientific reorganisation of industrial methods; and if the employers would devote to these half the attention which they devote to trying to bully, badger, bribe, or cajole labour into the acceptance of unscientific systems of payment by results, it would be better for all concerned. The biggest and most natural field for science in industry is in the management of inanimate objects; and there let it be applied to the full. Where it affects men, and is applied to men, its effects are far more problematical.

Sixthly, we have seen that the workers are very largely justified in their belief that, in many cases, scientific systems may create unemployment by creating conditions under which temporary unemployment is profitable to the employer. If this is to be counteracted, it should surely be done by placing the burden of unemployment, not upon the State, but upon the industry concerned. Let the employers

be compelled to pay to the Unions a maintenance allowance for all members affected by such unemployment, and one motive for the offering of unscientific inducements to Labour will disappear and in addition a big step will have been taken in the direction of decasualisation.

I have omitted from this paper far more than I have put in, and I have preferred to dwell at some length on a few points to ranging breathlessly over the whole field. I do not pretend that I have surveyed Scientific Management; but I have tried to bring out those features of it which seem to me to have the clearest application to the conditions of our own industry to-day. Scientific Management contains many good features to which no objection can be taken; but its claim to be a watertight and complete scientific system for industry is as false as its claim to be democratic. Our problem in industry is the creation of an efficient and democratic system. We must apply science; but we must not allow science to be a class monopoly. The Trade Unions must train themselves for control; and, in doing so, they must resist all changes which would have the effect of destroying or weakening their economic power. They must not, for their own sakes, block all industrial change; but they must adapt it to their needs as well as themselves to it. We cannot expect a truly efficient system in industry until we have an enlightened democracy capable of controlling industry: we cannot abolish the class-struggle with a blast from the trumpet of science. But we can make up our minds that the end towards which we must strive is industrial self-government; and we can test the schemes of Scientific Management by means of this principle. If we do this, we shall not find it wholly bad; but we shall find in it many dangers against which Labour must be on its guard.

In speaking on his paper, Mr. Cole said that the paper could not cover the whole ground, but he had tried to work out a few of the more important points in relation to Scientific Management. In particular, payment by results had been selected because it was the crucial question at the present time, and would play an important part between Capital and Labour after the war. The tremendous claims made by the founders of the system would not be put forward by advocates of Scientific Management at the present day. From the point of view of the employer and the industrial expert, the main claims were efficiency, to meet the need for greater output, and the effect upon wages—that is, the claim that under right management the workers would get an increase in wages. This seemed a sufficient argument to many advocates; but a mere increase in wages was not enough. We must not ignore the effects which the system might have on the working class—the loss of independence and the power of self-government. Even if the system did offer an increase in efficiency, he would oppose it if it did away with the possibility of self-government for the organised workers.

Just as the workers could not afford to have a "welfare" system which was entirely out of their control, they could not afford to have applied to industry a science which was out of their control. But there was a sense in which Scientific Management, in the sense of the fuller application of scientific methods to industry, would inevitably come, and one of the future tasks of the trade unions would be to adapt themselves to its principles. Even those things, however, that were good in Scientific Management, if rightly applied, should not be accepted by the trade-union movement until it was in a position to exercise control over them. The official element in the trade-union movement must have a more expert training than it had to-day, and there must be a better workshop organisation, capable of meeting the management on equal terms to discuss the problems of the industry with full knowledge.

DISCUSSION.

Mr. C. G. Renold (of Hans Renold, Ltd., Manchester), in opening the discussion, read the following paper :—

In criticising Mr. Cole's presentation of Scientific Management I feel considerable hesitation. What he has described seems so heinous and tyrannical that I am almost afraid to present another side of the question lest I appear to condone the crimes of which he accuses the scientific manager.

I would like to point out, however, at the outset, that many of Mr. Cole's charges are levelled, not at Scientific Management at all—considered as an alternative to existing systems—but apply to the whole capitalist system itself. And in these charges I very largely agree with him.

Therefore, before dealing with what Scientific Management is, it seems to me necessary to lay down clearly what it is not, as some of Mr. Cole's criticisms are directed at claims which are not put forward seriously by any of the saner leaders of the movement. Thus, it is not, and does not claim to be, a solution of the industrial problem ; it does not settle, on any grounds of cosmic necessity, what proportion of the products of industry ought to go to the various factors engaged, namely, workman, management, capitalist, etc. ; it does not solve the unemployment problem ; it does not settle, from absolute considerations, what are the qualities of energy and skill of the "standard worker" ; it does not infallibly ensure that all intercourse between management and men shall be harmonious and pleasant by substituting law and reason for force. It is quite true that claims somewhat of this kind were made by Mr. F. W. Taylor. They were not, however, the foundation of his system, but were afterthoughts. They were never, I think, held seriously by anyone but Mr. Taylor, and certainly will not stand examination for one minute. But all these problems, the division of the product, unemployment, etc., were in existence

long before the ideas behind Scientific Management were formulated into a system. They are not problems created by the introduction of Scientific Management, and it is hardly fair to criticise the system because it does not solve them. Scientific Management, not being primarily concerned with them, leaves them, in essence, where it finds them. I hope to show, however, that, due to the greater clearness and precision of organisation bound to obtain under Scientific Management, some of these problems are easier to approach than heretofore.

The ideas behind the various systems known as Scientific Management are concerned primarily with the technique of management and not with the fundamental reconstruction of the industrial system. Management in industry is concerned with the choosing, bringing together, proportioning and arranging of the various factors of production, with a view to their maximum productivity in the long run. These factors in production are of two distinct kinds—human and inanimate; in other words, the workman on the one hand, and the raw material, tools, plant, etc., on the other; and the two kinds of factors must be dealt with in quite different ways and largely from different points of view. Thus, the object of the manager should perhaps rather be described as the arranging, controlling, and proportioning of the *material* factors so that the efforts of the *human* factor may be as productive as possible. Considered in this way, management is a permanent element in any corporate action, and would be just as necessary to industry under a system of control by the workers as it is now under the capitalist system. This being so, the technique of management is well worth studying for its own sake, quite apart from its influence on problems outside its proper scope, such as the general structure or conditions of industry. It is of course obvious that Labour is vitally concerned in any modification of conditions which a new system of management may effect; but criticism of the two aspects—viz., technique and subsidiary effects—should be kept quite distinct. The first question is, how far does Scientific Management succeed in furthering the objects of management? and secondly, are the conditions of industry which would exist under Scientific Management more favourable or less favourable to the development of the legitimate interests of Labour?

The means by which Scientific Management attacks its problem of the correlation of the factors of production are as follows:—

1. Study of the work to be done, material, tools, methods, etc.
2. The selection of the individual men most suited for particular kinds of work and the training of them for that work.
3. Establishing standards of work and corresponding payment; fixing times for doing jobs and offering payment for their successful accomplishment.
4. The functionalising of control—the specialising on the part of the various officers of the management on such functions as control of flow of work, inspection, store keeping, cost collecting, etc.

It is, I think, clear that the aim of each of these four propositions would be acceptable to management under systems of State Socialism or Guild Socialism, just as much as under Capitalism, provided that the working out of them does not introduce conditions incompatible with good citizenship on the part of the workers. I suggest, therefore, that in considering these four propositions of Scientific Management three tests should be applied, namely:

1. Do they, in fact, succeed in making the efforts of the workman more 'productive'? or, in other words, in rendering the combination of the human and material factors in production more efficient than hitherto?
2. Do they enable the workman to attain a higher standard of living?
3. Do they make it more possible or less for the workers to undertake some of the functions of management?

Dealing with the first of these tests, there is no question whatever that the detail study of work always enables a greater output to be obtained from the same effort; indeed, in discussing Scientific Management a great deal is always made by Labour critics of the extraordinary increases in production which are in fact obtained, and these are apt to be condemned as being simply instances of increased effort on the part of the workmen, due to driving and resulting in strain and overwork. It should be realised that there are two quite distinct sources of increased production under such systems as Scientific Management, namely: first, increases due to re-arrangements of tools, methods, processes, or movements; and secondly, the calling forth of increased effort from the workmen by the offering of some special payment. The proportion of the increase due to one cause as compared with the other differs in every case, but in general on machine work, the increase due to changed methods is several times greater than that due to increased exertion. The first increase is due chiefly to the efforts of the management, the second to those of the man. The special payment is made partly to compensate the workman for increased exertion and partly for being required to work to detailed instructions. How great this extra pay should be, and how it should be calculated, are obviously among the most difficult questions with which Management and Labour are concerned. It should be noted, in passing, however, that there is no case at all for ascribing all the increase to the efforts of the workman. Moreover, the increase of product is not by any means all gain, as the work of carrying out the study and of operating the system based on it is expensive and has a first claim on the increased product.

Dealing still with the effect of the system in increasing productivity, it is clear that the selection of men and the functionalisation of control also tend in this direction. When all the various jobs in a works have been studied and the requirements for their performance are known, it is obviously much easier to transfer men who are not making good, or who are dissatisfied, at one job to another, for which their particular skill and

temperament make them more suitable. The requirements of the new job being known makes it much easier to teach the transferred man. This sorting out of the square pegs to the square holes clearly makes better use of the powers of all. The feature of the specialisation of management functions, which has the most easily recognised effect on productivity, is probably the control of the flow of work. Under other systems, where the foreman is expected to exercise all the functions of management, he is generally more efficient from a technical point of view than as a planner and arranger of his work, and a good deal of waiting about between jobs is the result. This waiting is very much reduced, and a greater proportion of the man's time is spent on productive work, under a system where the flow of work is planned and routed by an authority specialising on this duty. There is therefore no doubt in my mind, and I think this will probably be accepted by you also, that Scientific Management satisfies the first of the three tests proposed and may be expected really to increase the productivity of industry.

The second test, namely, the effect on the standard of living of the workers, must be considered from two points of view. First, as to the proportion between remuneration and effort; and secondly, the effect on the status of the workman. The question of schemes of remuneration I propose to leave till later.

With regard to the second point, there is a very general fear that the skilled workman will be rendered unnecessary, and will be either eliminated or degraded by being restricted to a narrow range of work, carried out on prescribed methods. It is alleged that the splitting up of jobs, likely to result from study and investigation, enables much work, previously done by skilled men, to be carried out by unskilled. These are undoubtedly real objections, and must be met if at all possible; but here I would point out that subdivision of work was not introduced by Scientific Management. It is a part of the change from handicraft to machine production, and has been a more or less acute problem ever since the Industrial Revolution. While probably we all agree that the ideal of individual craftsmanship is more attractive than that of machine-tending, there is no possibility in sight of realising it on any general scale. We cannot go back to industry by handicraft—all we can do is to make the conditions of machine production as consistent as possible with the development of good citizenship.

Now as to whether Scientific Management exaggerates the danger of degradation of the skilled man, is not clear. My own opinion is that it does not, and I offer the following arguments in support.

1st—It is not by any means all work which, when studied, can be carried out by less skilled men than previously. The methods laid down as the result of study are often more intricate and require more skill for carrying out than before. The speed of working may be so increased that the workman's skill is still required, not to lay down the method itself, but to make the adjustments to the tools and the machines to enable the speed to be maintained.

2nd—There are, however, many jobs to which this does not apply. and the work, after study, can be carried out by less skilled men. In this case some of the skilled men will generally be needed for supervision of a group of machines manned by the new grade of labour. Admittedly this does not account for all of the displaced men, but the discrepancy is less great than would appear since the system requires not only more skilled supervision at the machines themselves, but more skilled men generally in the way of tool-makers, time-study men, experimenters, etc., the proportion of skilled management staff to workmen being two or three times as great under Scientific Management as under less detailed systems.

3rd—For the absorption of the remainder of the skilled men we shall have to look to the expansion of the industry due to the increased efficiency and consequent lowering of price. Our own experience does, in fact, bear this out. This process has been in operation at our works for five or six years, and not only has no skilled man been discharged in consequence, but there has been an almost continual demand for more skilled men than were available. It would be quite reasonable for Labour to demand some guarantee in this respect. The same consideration applies to unemployment generally. Periodic unemployment, and more particularly " standing-off," is due to faulty organisation of industry—and the employers, as being chiefly responsible for the organisation, should obviously bear the cost.

In considering the question of the degrading of skilled men another aspect of the matter must not be lost sight of, namely, that the change, as regards the unskilled or semi-skilled man who is introduced, is a distinct advance in status. He is raised often from the level of a casual labourer to that of a man with a definite trade. This is probably more marked under Scientific Management because of the training which it is part of the system to provide for all workers.

It may still be objected that even though the skilled men of the present generation may not suffer, due to their absorption either on studied jobs which remain skilled work, or by being required for supervision, or due to expansion of industry, the proportion of skilled men to unskilled in the trade will gradually decrease. This is probably true, but I see no grounds for believing that the disturbance of the proportion will be any greater under Scientific Management than would otherwise be the case. We have even a striking instance in our own works, where the proportion of skilled men has actually been increased as the result of study ; the automatic machine department—previously manned by 80 semi-skilled men and four skilled foremen—is now run by five skilled foremen, approximately 30 skilled setters, and 120 unskilled women. The proportion previously was 4-80, but is now 35-120.

It has already been pointed out that transferences of men from one job to another are easier under Scientific Management since the requirements of each job are more accurately known. The same consideration applies to promotion, and on this question our experience is directly

contrary to Mr. Cole's fears. In our drawing office we have men who were machine men. Our time-study men were some of the first workers who were studied. The planning department is manned very largely by machine men. We find that just the very opposite is the case to what Mr. Cole fears.

The duties and requirements of the various management posts are studied and scheduled almost as closely as the machine processes. This is a natural result of the breaking up of the general control previously exercised by all grades of management officers and the instituting of specialised control. One of the specialisations effected under this scheme is the supervision of the human element, as such, throughout the whole works organisation. This results in more attention being paid to the discovery of latent talent and a greater ease in making promotions, due, on the one hand, to this increased knowledge of the individual capacities of workmen and staff, and on the other, to the more exact knowledge of the requirements of any post which is to be filled.

To sum up the considerations relating to the second test, I am inclined to think that Scientific Management is likely to bring about a general upgrading of workers rather than to have the opposite effect. This is distinctly evident in three directions:—

1. Promotion of the skilled man from machine to supervision.
2. The semi-skilled man is enabled to do a better class of work than he could possibly do otherwise.
3. The functionalisation of management makes promotion all up the line easier.

The test which I gather is of most interest to you here is the effect which Scientific Management is likely to have on the possibility of increased control of industry by the workers. Personally I have a great deal of sympathy for this desire, and I am convinced that Scientific Management makes progress in this direction very much more possible than it is at present. Don't run down Scientific Management because it does not specifically offer joint control. Neither does the present system.

At present, bargaining between the trade union and the employer is, to all intents and purposes, limited to a settlement of the time work rate and of the minimum percentage above this which piece work should yield. The setting of individual piece rates is, in the engineering trade at least, largely a matter for settlement between the worker himself and the management—or, if you like, is imposed by the management. I do not suggest that, under Scientific Management, it would be practicable for every standard time, and the corresponding rate, to be referred, individually, to the trade union officials, but if the general principles under which a time is set and payment made are agreed to between the management and the union, the union will in effect have achieved a considerable amount of control over the setting of individual rates. The principles on which agreement would have to be reached would cover the general method of making a time study;

the scale of allowances to be added to the ideal time-studied time to provide for fatigue ; the proportion which the payment for standard production should bear to the time rate ; the method of graduating the payments above and below the standard ; the method on which changes of process should be taken into account ; and, lastly, the scale of allowances for unforeseen contingencies. Once these principles have been settled, the times so set, and the payment for reaching standard production, for individual jobs would fall into line with a very fair regularity, and could really be considered as having been settled in conjunction with the union. Particular times could always be challenged by a union official, and the method of working out could be investigated to see that the principles agreed to were being put into practice. This is not possible with the present haphazard methods for setting piece rates. It is only by a detailed study of the work to be done that such bargains can be satisfactory, and it follows that the conditions of the bargain must be set out fully and minutely if disputes as to the good faith of the parties are to be avoided. In other words, the detailed instructions for carrying out work, which are such a feature of Scientific Management, enable general bargaining between trade union and employer to be applied with fairness to particular cases.

It seems to me that the trade unions, so far from objecting to detail study and instructions, should insist that rates should be set on no other principle ; and they should make themselves at least as competent as the management to deal with work from this point of view.

A word of warning is perhaps necessary in this connection. It is useless to object to such methods on the ground that the systems which result are complicated. The conditions which affect the productivity of any particular process are necessarily complicated, and if the effects of changes in these conditions are to be taken into account a very elaborate scheme must be evolved *e.g.*, allowances for fatigue, allowances for changed conditions, tools, material, etc. I think the unions would also have to be prepared for rates which proved unexpectedly easy to be revised, both on the ground of competition from other employers and of jealousy among the workers caused by abnormal earnings on the part of individuals. If the trade unions are to undertake management they must master the technique and be better managers than the present employers. The problems to be faced by them will be just the same as face the management under present conditions, and trade unions will do well to study Scientific Management in order to be ready.

I now propose to deal with the question of remuneration for effort. Mr. Cole accepts time work and, under certain conditions, straight piece work, as fair and satisfactory, but alleges that all other systems are frauds. His argument is based on the fact that under the various bonus systems quoted the price per piece falls. The argument is ingenious, but, I think, misleading. I am not personally wedded to any particular system of efficiency payment, and if a very strong point were made by the unions that nothing but piece work should be allowed,

I should not have any very great difficulty in accepting it. But the allegation of fraud is misleading. The point of view which I wish to bring forward is, broadly, that there is no fundamental difference between straight piece work and the various systems of bonus; the difference between them is more a matter of convenience than of principle.

Beginning with time work, Mr. Cole states that "the hourly rate has reference to a more or less defined output . . . . while the piece rate invariably has reference to a more or less defined standard of living." Now the standard of living obviously depends on the wages actually earned per week, and it is well known that piece work rates are in fact regulated with the object of yielding a certain agreed increase on the time rate. In both cases, therefore, a more or less defined amount of work is expected for a certain payment. The difference is chiefly an accepted difference in intensity of work. Day work speed is admittedly not the best of which the workman is capable, while piece work speed is supposed to be so, and the price per piece is calculated to yield, at the supposed maximum intensity of effort, a definite proportion above the time rate, say 25 per cent. or 33 per cent. Now, all bonus systems start from the same point of view, namely, the fixing of a standard output at the supposed maximum intensity of work and the pay of something more than the day work rate for it. In essence all three are task systems. Mr. Cole applies as the test to all the bonus systems the piece price per article at various efficiencies of production, and shows that in general the price per piece falls with increased production. This test it seems to me is not vital—the vital question being the task set and the payment offered for it. The variation of the payment above and below the task is rather a matter of convenience than of principle.

As there may still be some points raised by Mr. Cole with which I have not dealt, I propose to run through his summary and to make any further comments still needed. His first point is: "Fancy methods of payment are unnecessary for the application of scientific principles to industry." His objections to them are the falling piece rate, which has already been dealt with, and their lack of scientific basis. To support this he contends:—

"Science cannot determine the absolute amount of payment, but only the relative amount as between one worker and another.

"Science cannot show which worker to take as standard.

"The effect on earnings depends on arbitrary fixing of standards by the management.

"They (bonus systems) are unjust in their application to individual work as against repetition work."

But all these objections apply with equal force to straight piece work, and should not be brought forward, therefore, as objections to Scientific Management.

Secondly, Scientific Management is objected to because the conditions of employment are imposed by the employer on the worker. This objection applies to the whole industrial system, and is not special

to Scientific Management. I agree that Labour should take a greater part in the work of management, and I have tried to show that the detail study of work, which is the outstanding feature of Scientific Management, renders joint action of Labour and Management more possible.

Thirdly, the methods of payment advocated by the exponents of Scientific Management are "a crude appeal to individualism and set each man's hand against the others." If this is the case, it applies with still more force to straight piece work, since the variation of payment above and below the accomplishment of the standard task is greater than on any of the premium systems. If this is felt to be a very grave objection, I do not think that the paying of bonus to individual men for their individual production is essential. Either the men could pool their excess earnings and divide them evenly of their own accord, or bonus could be paid on the total output of a group of workers.

Fourthly, an impassable gulf is said to be fixed between Labour and Management as the result of Scientific Management. Our experience is directly contrary to this.

Fifthly, it is recommended that Scientific Management should be applied to inanimate objects, and not human beings. I agree that by far the greatest savings can be made by re-arranging the material factors in production. But it should be noted that this fact somewhat weakens the claim of Labour to share in the increase. Mr. Cole considers it waste of time to try to induce Labour to accept any of the unscientific systems of payment by result to which he has raised so much objection. I must again emphasise that there is no essential difference between piece work and bonus work. Both depend on the fixing of a standard time for a given job and the payment of a fixed sum, which can be the same in both cases, for its accomplishment. The method of setting the standard time followed under Scientific Management is unquestionably more scientific than the usual rough and ready basis for piece prices.

Sixthly, with regard to unemployment, I am not convinced that Scientific Management affects this, one way or the other, but I quite agree that the cost of unemployment whether produced by Scientific Management, or by the present conditions of industry, should fall on the employer.

In conclusion I wish to say that I hold no brief for any particular system of Scientific Management. My firm has applied many of its ideas for a number of years past, but I make no extreme claims for it. I do not expect it to bring the industrial millennium. That depends on the qualities of statesmanship shown by the leaders of Labour on the one side, and of the Employers on the other.

Scientific Management is only concerned with the details, not the fundamentals, of the problem. Its primary aim is to increase the productivity of industry. This, apart from any other consideration, is a matter of national importance. The distribution of the products of industry is quite a separate question.

I appeal to you, therefore, as leaders of Labour opinion, to examine sympathetically any device for increasing production, provided it does not place Labour in a worse position than before. Don't condemn Scientific Management out of hand, because it does not, of itself, place Labour in complete control of Industry. I have tried to show that it makes an increase in Labour's share of management no more difficult to achieve than do present conditions, and I believe it even makes it easier. Meanwhile the rate of production of wealth will have been increased by the adoption of the general ideas of study, selection, and training underlying Scientific Management.

A DELEGATE said he understood Mr. Renold to say that a certain corporation paid compensation for men displaced by the introduction of machinery. Could he tell them if he had any idea what sort of scheme of compensation was accepted by this corporation?

MR. WM. JEFFS (Ten Acres and Stirchley Co-operative Society): As a workman I know what it is to work under the system, and therefore can speak of it from a practical point of view. I have worked under good employers, with mutual confidence between workman and master, but the employers instituted Scientific Management, and things have gone from bad to worse. Efficiency has gone up, but mutual confidence has disappeared. The object of the system is to gain at the expense of the workman; it has the tendency to make an old man of one at 50. The workman gets a few shillings extra per week, but that cannot buy his life back again. After seven or eights hours' work he is physically unfit for anything else. There are some good points in Scientific Management; but there must be reason, give-and-take, and confidence on both sides if it is going to be a success. The system seems to hurry the workman too hard. In about five hours he gets 1s. 10d. extra, but he saves 4s. 2d. Of course it pays to give the man 1s. 10d. to get 4s. 2d. extra out of him.

MR. EDGERTON (London Society of Compositors): Better management is a good thing all will agree, but it should be for the benefit of the workman just as much as for the employer. I agree with Mr. Renold that it would not do away with a great deal of skilled labour: in many cases it makes unskilled and semi-skilled labour more skilled and increases the status of the worker, but I would like explained why every system of Scientific Management brings the pay line down after the efficiency mark has been reached, increasing the profit and reducing the pay. If a machine will do an extraordinary amount of work employers are prepared to pay more for it, therefore, if a worker can do more why not pay him more?

MR. G. MIDDLETON (Postal and Telegraph Clerks' Association): I would like to know if Mr. Renold accepts Mr. Cole's challenge as to the degrading of labour under Scientific Management? Mr. Renold did say something on this point, but it was not clear to me. He said that very often the proportion of skilled workers was increased, but his illustration was confined to a particular department in his own

works. What is the general effect? In Prof. Hoxie's book the weight of evidence is against Mr. Renold in this respect. I understand the investigation (of which the book is a report) was conducted by an impartial investigator, assisted by a Scientific Management expert and a nominee of the American Federation of Labour—but it is impossible to go into the points raised in it here. I think Mr. Cole's advice excellent, that all trade unionists should study this important question of Scientific Management—it is something we ought to know more about; and in this respect Labour is likely to be caught napping.

Mr. A. C. Mabbs (Coventry Trades Council): Scientific Management should be discussed at the present time, because we have to face the question of increased production. After the war the advocates of the system will be first in the field, with a good prospect of catching the worker unawares. I think Ruskin College is to be congratulated on getting an employer to come to the conference, and if Scientific Management is carried out by him in his works in the spirit expressed here, the effects will be much less harmful than in many other places. We do not get a greater production at the present time because of the antagonism between employer and employee, and Scientific Management will be likely to increase this. Great as has been the increase in production since the beginning of the war, it is nothing to what could be done if the antagonism could be eliminated. You cannot do this by Scientific Management or anything of that kind. We must get hold of industry, so that everyone becomes a part of the management—it must be made to the interest of all to produce more than they were producing before. Get that, and the present difficulties will melt away in a very rapid way. This is the only possible cure. The most advanced section of the workers are out for control all the way down, and particularly control in the workshop—get it, and everybody will be looking out to save labour, and therefore we shall have better results.

Mr. Ald. W. Wheatley, J.P. (Huddersfield Trades Council): According to my conception Scientific Management based on human understanding should be taken from the point of view of living, not of profit. Instead of all this deep research and inquiry how human beings could be made to produce more, we should organise things in order to make more of life, and not for simply producing something—many of us have not lived yet! We must produce the things required in the most scientific fashion, work as little as possible, and enjoy this world. It is not possible for capital to exist as it is to-day and yet appease the men who are producing wealth. Every man is producing tons and tons more than he consumes, and there is something else to be done besides speeding-up. After working 60 hours a man may not be getting sufficient, but his 'brother' who employs him is piling up wealth in his ledger from the worker's blood and sinew. We have to learn that it is our human duty to make life beautiful, happy, and contented, and we must work on that basis or none at all.

Mr. P. Myers (A.S.E.): Both speakers have emphasised the need for men in the trade union movement to make themselves masters of their particular industry. Human nature being what it is, trade unions should hold out to their men the incentive of the possibility of improving their position by their intelligence, and we should try to bring about the conditions favourable to the development of the most intelligent. I personally would fear the control of industry by the workers at the present time, as Labour is not qualified for the task. The application of Scientific Management all round might make it possible for an enormous number of men and women now casually employed to improve their position, and so raise the standard of life of a large number. There may be some danger of labour being exploited to a still greater extent, but the most intelligent are the least in danger of exploitation. By intelligently understanding our own industries we could raise the level of our members, and put them in such a position that they could not be exploited. We must fit ourselves in this respect, and having done this we shall have found out the method of assuming control.

Mr. W. B. Neville (Royal Arsenal Co-operative Society): I represent a section of the workers who are controlling industry. As a Co-operative official, Scientific Management has occupied my spare moments for some time—not only the human element, but also the workshop and factory; and it is only when the workers thoroughly understand Scientific Management in all its phases that they will be fitted to control industry. My own society has recently established a bakery on the most advanced scientific principles, not only with machinery but also with organisation of labour, and the result is that we are able to sell a cheap loaf, and this has brought increased trade to the society. The better the understanding of Scientific Management, the more will the worker be able to prove his fitness to take control of industry when the day comes.

Mr. Cole's Reply.

Management may be responsible for a very great amount of the increase in production, but I do not see why the results of these improvements should go to the shareholders rather than to labour: the distribution of wealth ought to be independent of who creates it, and should be distributed on just principles, which in the last resort would mean equality. I am not opposed to efficiency in industry, but to 'efficiency systems' of payment, by which the employer tries to get the last ounce out of the worker. Mr. Renold has said that he had in his firm been able to absorb all surplus labour, but I do not think the general adoption of Scientific Management will make it possible to absorb all skilled labour. Another point, with which I am in agreement with Mr. Renold, is that the method of paying wages is not of fundamental importance in Scientific Management. I was very glad to hear him say that if the trade union offered a fundamental objection to any efficiency system of payment he would not regard

it as absolutely vital. Getting rid of the efficiency method of payment would open the way to a consideration of the other questions on their merits. Mr. Renold also said that time-study methods were bound to be complicated, but I want to say that the method of payment must be simple, even if the calculations on which it is based are abstruse, and I want men able to understand these complications to do the bargaining about piece work prices on behalf of Labour. Mr Renold said you could not fix piece prices by collective bargaining—you cannot perhaps decide once for all all the little details, but the method of payment could be much fairer than it is at present if you had better organisation in the workshop, and trade union officials were better equipped to deal with such matters. There should be no 'efficiency' system unless there is a really strong intelligent control by the workers in the workshop. I do not think the relations of Labour and Capital will be improved after the war, and I hope they will not, because I believe in the class-struggle and regard their interests as irreconcilable. Any system which supposes co-operation between Capital and Labour will break down. This is not vital to all the arguments put forward on behalf of Scientific Management. I think it quite conceivable that some of the suggestions made by Scientific Management, rightly used and fully understood, would strengthen the trade union movement. I merely criticised the things which would weaken the movement, and which Labour ought not to accept. All employers are not like Mr. Renold: for every good one you will get a hundred bad variations of so-called Scientific Management. Most employers will try to adopt its worst features, particularly 'efficiency' methods of payment by results, especially as employers have increased their organisation and production so much during the war, and will desire cheap labour power for world competition after the war.

Mr. Renold's Reply.

The first speaker raised the point about skilled labour displaced by machinery. I believe I am right in saying that there is a large corporation which has adopted an arrangement with the trade union whereby they undertake that not more than 5 per cent. shall be displaced in any one year, and for those so displaced they will pay to the trade union fund a sum equal to what the trade union has paid to these men. I believe the same arrangement is in force regarding ordinary unemployment, *i.e.*, they recoup the union for the amount of unemployment benefit. The other criticisms fall into three general lines: one is, that the present method of running industry is nothing more than an exploitation of the worker, and that Scientific Management is a trick to turn the screw a little more. Such a charge applies to the whole industrial system and contains, no doubt, some truth, but it is not what we are here to discuss. My point was that Scientific Management would offer a chance of progress in the direction of increased control by labour of industry.

As regards the degradation of the skilled worker and the absorption of surplus skilled labour: one speaker cited Hoxie as tending to show that the workman was degraded. I think there is a misconception of the whole contention. The immediate point is, will skilled workers of the present generation have jobs in the next few years? I think they will, and I think we must leave it there. Our experience bears out my argument. Our firm certainly has been growing, but it is the firms who take the most progressive line who do grow. It does not apply to everything that increased production will mean an increased demand; but to most things, if you can make them cheaper. My impression of the Hoxie investigation is that Scientific Management was not really practised in any of the places investigated: the employers merely tried to put into effect various dodges, but anything like a real scientific study of conditions was not made anywhere. I have visited a number of these supposed scientifically managed firms, but my impression was that, far from their teaching us, we could teach them something about a really scientific basis. I think Hoxie shows that. The result of such methods is to increase antagonism. A speed boss would have to have special training, but I don't think the speed-boss system would work in an engineering shop. We certainly found, when we tried to control the flow of work separately, that it broke down, and we came back to a system of management in which the foreman, as local manager, is supreme over all the functions of management, supported by expert assistants, and that arrangement was easily worked. The foreman of a large department has a technical assistant who is a specialist on the process, an "order-of-work" assistant, an inspection assistant, and a store-keeping assistant. It is easier to pick out people from the ranks able to fill these specialist jobs than it would be to fill each post by a foreman who would have to be a good hand at all of them. The foreman under our arrangement has to be, primarily, a manager of these specialists, and the best specialists get promoted to the foremen's positions.

Another criticism was that it is no use tinkering at the present system. Scientific Management may be more productive, but as far as labour is concerned the whole of the present system must go and the capitalist must be abolished, the worker taking over control. We are not here to discuss that, and, as an employer, I hardly like to offer an opinion, but under such a system conditions will not be altered so much as you appear to think. There must be management, and the mere fact that Trade Union affairs do not always go smoothly should be taken as a lesson that in the very much more complicated communities, with which industry will be concerned, there will be just the same cleavage between management and worker, and the same difficulty of the workman in understanding all the conditions and considerations which affect the management. I do not think that criticism goes far: if you run industry you have to know the technique of management, and this is quite a distinct profession. One of the greatest difficulties of payment by results (no

doubt, ultimately, it would be far better to do away with this and have payment to men *as* men) is the jealousy when one man gets a great deal more than the next man to him, and these discrepancies are greater in some kinds of work than others. It seems to me a convenience to make the gradation of the payment rather less steep, so that the less skilled man does not suffer so much, but on the other hand the more skilled man does not gain so much.

SECOND SESSION.

WOMEN IN INDUSTRY.

By MARION PHILLIPS, D.Sc. (Econ.),

(General Secretary of the Women's Labour League).

There are two ways in which the war has deeply affected the whole outlook of women in industry. From those two there flow a number of immensely significant alterations, not only in the point of view of women themselves, but also in the estimation of and indeed in their actual value to the whole community. But the roots of the many changes which we see around us in the position of women, changes that are psychological as well as economic, are due to two fundamental changes of the social balance. The one is the absence of many millions of men from their homes for service in the forces of army or navy, or as munition workers, and the other is the fact that, for the first time, the demand of the employer for the woman worker has been greater than the demand of the woman worker for employment.

The change brought about by the first is not so much a change in economic relations as a change in outlook, a psychological alteration in the mind and spirit and bearing of women. For the absence of many millions of husbands has thrown upon the wives the full control and responsibility for the family life. I do not want to undervalue the responsible share which women have always necessarily had in these tasks, but the taking away of the husband and father has altered entirely, for the time being, the basis of the partnership which every married life, happy or unhappy, successful or unsuccessful, is bound to observe. For the first time, women of all sorts and kinds, of all phases of weak and strong characters, with experience of the world and without it, have had to face the conditions of a country at war, and to deal with the problems it has created as independent individuals without anyone at hand to take responsibility or to decide their action for them. More than that, they have had to act without consultation with their nearest and most intimate counsellor; and again I say, whether or no most husbands give good or bad counsel, the position of women, deprived of all possibility of that counsel, is an entirely new one. The effect of it can be seen all around us, and I think there is little doubt that it is bringing about changes in the character and strength of mind of women which are yet incalculable. But they will have to be reckoned with in the future, and the effect of this freedom from any sort of control or advice from the ordinary partner and commonly leader of their joint life, has certainly given to the everyday woman a new grasp of experience, widened her outlook, and increased her confidence in her own judgment, until she faces the world to-day from a totally new angle.

In this new independence of the wife, she has undoubtedly been helped by the effective strength of the industrial army of women. Women of all ages up to thirty-five at any rate, have found themselves wanted in the industrial world in a new way. They have been wanted not merely as cheap labourers, scarcely worthy of their hire, but as responsible and well paid workers with the full dignity that skill, steadiness, and capacity establish. I do not say for a moment that there are no cases to-day of underpaid women workers. Any Trade Union office has but to turn over the pages of its correspondence to find plenty such instances; but I do say that the opportunities for women to rise above the old level of the industrial drudge have for the first time since the Industrial Revolution been widely opened. There are to-day hundreds of thousands of women who are earning the first living wages paid to women in industry, and there are many thousands who are earning wages equal to those of the men whom they are replacing. More than that, though at any one time there may always be found a handful of unemployed women here or there, there has never before been a time when the work has been waiting for the woman, rather than the woman been begging for the work. High wages can be earned. Regular and indeed often too regular and too long-continued employment can be readily found. Skilled trades are opened. The highest posts in the factory world are open too, and women have for the moment a fair field and favour for their industrial skill to wax great and their wages to grow larger.

Even in the case of those women and girls whose wages are still low, the influence of women's improved industrial outlook is having its effect, and not only is this shown in the growing number of Trade Unionists amongst women, but also in the improved bearing and independence of the workers even in sweated trades.

The increased wages, the increased demand, the increased opportunity for skill to find itself welcomed and rewarded,—all these have both an economic and psychological effect on women. I may seem to labour too much this change in outlook. If I do, it is because I want men to realise that in dealing with the problems of women's work in the future they have to think of the women under this new aspect, as women who have learnt their own value as workers, learnt the independence that a real living wage can confer, and learnt that men do not hold a monopoly of industrial skill and capacity. If some women knew that already, their numbers were few, and their convictions lacked widely gathered proofs. To-day there are proofs all around us, and women know their strength. It will be well for both employers and fellow workers to understand that in future the woman in industry is a far stronger competitor, both mentally and economically, than in the past. But I believe that if they see these things, and if the male worker realises them and what they imply, the term competitor may be relegated to the dark ages of the past and the term colleague be substituted.

It is towards this co-operation between the workers of both sexes, this recognition of equality of right for both, with due allowance for the needful regulation of their energies in the interest of the whole community, in equality of opportunity (to use the old phrase), that I believe industrial salvation must be found. The old custom of woman acting as the useful drudge and tool of the employer, always at hand to cheapen the wage bill, always docile with the docility of the economic slave and the meekness of the permanently underfed, has reacted with deadening effect upon the male worker's standard of living. In the changing conditions of a world at war there has arisen a possibility of removing that menace of industrial oppression, and with the coming of peace it should be one of the first objects of the Trade Union world to set on a firm basis a new partnership between men and women workers, so strongly knit by the common interests of both that no disturbing element can cause its dissolution.

The present position of women and the changes wrought by the war have been very fully and carefully dealt with in the Report of the Standing Joint Committee of Industrial Women's Organisations, published with its endorsement by the Joint Committee on Labour After the War.* This report sets forth the present and then deals with proposals for the future, and I want just to summarise a few of the results reached.

The Report shows clearly the extent to which wages for women have risen and the result of the facts put forward is this:—Wages have risen *to some extent* in all trades in which women are employed; but in those in which organisation is weak, the rise has been for the most part of a couple of shillings a week by way of war bonus, or by a slight increase of the rate per hour, and only in the case of learners has been strongly marked; where there are Trade Boards the rise has been gradually gained after much pushing by the Trade Unions, and the recorded increases are as follows:—

> "The Sugar Confectionery Trade Board decided on a minimum rate of 3d. per hour prior to the war (though this rate was not 'fixed' until after the war). A rate of 3¼d. has now been provisionally fixed. In the tailoring and shirtmaking trades the pre-war minimum was 3½d., and proposals to fix a minimum rate of 4d. have just been issued. It will be seen that to maintain these minima at their pre-war value a rate of 4¼d. in the first case and of 5d. in the other should have been made."

But where women have replaced men in the well organised trades, *e.g.*, engineering, wood work, etc., the wages of women have been brought by Trade Union action to a far higher level. It is unnecessary for me here to go into the details of increases, the extent to which women replacing men have gained the same wages, whether piece or time, the extent to which by action under the Munitions of War Acts a rate of £1 a week was first fixed as a maximum and minimum both in work

* "The Position of Women after the War," price 2d. To be obtained from The Labour Party, 1, Victoria Street, S.W.

other than substitution for skilled men, and finally under the most recent regulations 18/- made a minimum and the rates above that made more elastic.

What is to be noticed is that it is only where organisation, either of the men in the engineering trade or on the railways, or in the dyeing and bleaching trade, or amongst the women as in some centres of unskilled or semi-skilled work, has been strong, that the increases of women's wages have been marked, and I believe that it is the fact that where the men have believed that the substitution of women is entirely temporary it will be found that they have been somewhat indifferent to equality of rate. Wherever they have realised the possibility of women remaining in a trade they have been more fully alive to the importance of getting economic equality between men and women.

It may be said that while women's wages have increased so that the prevailing rate of 11/- before the war may be compared to a rate of near £1 now, it is a wage which is only nominally higher on account of the high cost of living. This is undoubtedly an important qualification, but at the same time I think it will be found that, taken all round, reckoning the greater regularity of employment, the prevalence also of overtime, and the number getting above the prevailing rate, it is the fact that women are receiving even in real as opposed to money wages a considerable increase.

Nor is a nominal increase wholly unimportant in looking to the future. Even though prices may fall, it can be made difficult to lower wages which have once risen. The number of shillings per week quickly gets a support of custom.

But they are gaining that increase at considerable cost in certain other ways. If they have been able to get more food, and I believe up to the present that has been the case they have also been giving far more of their strength.

This comes about in two ways. Women have been doing much work which was previously held to be unhealthy or unsuitable, and from which they have previously been excluded. I think the grounds for these exclusions have often been slight, and the exclusion has been influenced sometimes by fear of their effect on wages rather than on the ground given of unhealthy or immoral or generally unsuitable conditions. But it is certain that in many cases the grounds were real, and that at present women are employed on many processes which we should be sorry to see them continuing to work at. Anything which they can by any possibility do at the moment, they are now doing, with very little consideration for the after-effects. They are also working under less rigid factory regulations, and constant overtime, Sunday work, and night shifts will all have their effect on women's strength in the future as well as in the present. Moreover, under the double pressure of economic need and patriotic zeal, married women with children are more than ever before taking part in industry. The effects here are not on themselves alone, but the babies and children are

becoming more and more the sufferers. Take, for instance, the position as to Munition Crêches.

The Munitions Department is encouraging with advice, exhortation, and finally with financial aid, the establishment of crêches for the munition worker's children. Well and good, we say; it is better that the mother should place her babies in a well-ordered crêche rather than leave them for the day with this neighbour or that—a haphazard method at the best. Yes, but 'by the day!' What we are not realising is that crêches are being established not only for the care of the children by day, but for the care of them by night.* In certain areas, mothers working on night shifts can board their little ones out by the night or by the week. Thus a new condition of affairs is growing up, and women working in National Filling Factories who have young babies are actually being advised to wean them, because the work does not agree with the production of mothers' milk. Add to this that the mother is having the terrific strain of working at night and minding a home—and probably a cross, milk-fed baby—by day! What chance will the next baby have after this experience? The fact is that the demand for workers should be better regulated, and that no nursing mother should be employed, not only not on night shift, but not on work which makes suckling unhealthy for the child.

I have said nothing of the risk of planting crêches in or near explosive works. I have said nothing of the health of infants and tiny children taken to and fro in the crowded trains or trams to the crêches at unearthly hours at nightfall or at dawn. But I want to point out to you that this whole method means a very forcible breaking up of the family life of the community, and that it is a curious commentary on the old abuse of the Socialists who were supposed to favour such a process and to desire the barrack system for child-rearing! So far as I know the Labour movement, through the War Emergency: Workers' National Committee, has made the only protest against this pitiful destruction of the baby's home.

But home life is being broken in another direction also. To get the necessary mobility of labour, workers have been moved from one district to another until in every large munition centre there are thousands of women, often no more than young girls, living in hostels, or lodgings, or huts. The effect of heavy work and long hours under these conditions must be far greater than when they live at home, for there is in the ordinary home a different kind of care and comfort from that of lodgings or the most approved type of hostel. There is also a certain restraint which parents and brothers and sisters, friends and familiar surroundings exercise, which is lost when labour comes to be so mobile as it is now! The system has also encouraged schemes of almost military discipline, and in many cases all sorts of interference in the lives of the workers by their employers, welfare workers, and official and unofficial philanthropists. Thus the influence of the dis-

* I do not know whether these crêches are subsidized by the Munitions Department.

cipline of the workshop has been carried very often into the private lives of the workers. The dangers of this are too obvious to need comment.

But while we can see in many directions that the pressure of war needs has had its bad sides, that women have in certain respects lost protective legislation which once helped them, and that the home conditions have been worsened in many ways, it has always to be remembered that before the war the conditions for women, so far as wages were concerned, were so intolerable that anything which relieves the economic pressure upon them has a balance of advantages. I am inclined to think that the essential condition, the primary condition for welfare, is sufficient food, and I know that many working women have for the first time known what it is to get sufficient food since they began to do war work. They have not all succeeded even in that, but the level of food consumption amongst women and girls has risen surprisingly and has created a new demand which the future will have to try and satisfy.

Their old industrial slavery was a slavery of a hopeless kind. The low wages and the lack of scope together pressed them down into a helpless kind of drudgery. The possibilities of good industrial work, even when not achieved, are a hopeful feature, and every woman is affected by the sense that she may rise to a higher industrial level.

But in the brief sketch I have given of the significant features of to-day, I hope that I have not painted too sharp and distinct a picture. I have tried to bring out the salient points and, to sum them up in the fewest words, I should say that they were these :—

A demand for women in industry of all kinds, and the opening to them of skilled and well paid work.

A general raising of wages, from amounts of a few shillings to treble or quadruple their former earnings.

A raising of the woman's standard of life and expectation for the future.

Heavy pressure upon physical strength and a general dispersion and scattering of home groups.

A great influx into industry of married women with young children.

A great growth of independence of mind and action amongst women and girls.

A growing belief in capacity and desire for equality with male workers.

There has been an increase of women workers over pre-war numbers of something little short now of one million, and about half of these have gone into industry. How far all of these will desire to remain in employment it would be hard to say. But this is clear—the woman who has earned a good wage and known what it is to have her own money to spend will not readily give up the economic freedom and scope in life that it has given to her. On the other hand, women are as interested as men, since most women become wives, and so enter into a close partnership with the male worker, in the maintenance of a high standard of wages for men and also in the sufficiency of

employment for men. No wife or daughter admires the laundress's husband. It is pretty generally held by women that nothing is worse, socially as well as economically, than the unemployed man. And her honourable understanding with the men who have entered their country's service in the army or navy, or on national work of other kinds, is that on their return the women shall not keep their jobs away from them. That is clearly the right position. The returning man gets his job. The woman must in fairness give way to his claim. But there are many jobs to which men will never return. There are changes in work which have swept away the old positions, there are men who have given their lives, there are men who have given their strength and come back crippled, there are men who will go seeking more adventurous paths of work for the future. And there may be certain paths of employment that will demand more workers than ever before. But take it all round, I believe we must face the fact that with our present army of workers the amount of work available will not be sufficient to go round. What is to be the action of the community in face of that? It might be to say, "Well, there is one thing clear: the emergency of war alone called women into industry of this or that kind: we must go back to the old scheme of pre-war days and shut women out again: we must make room for the men at all costs, and back again to their ill-paid work with its narrow scope of unskilled and semi-skilled avenues of employment the women must go." That indeed would be the strictest interpretation of the Trade Union's pledge for the reinstatement of their rules. And they have the right to demand it if they feel it just and wise to do so: or would it be better to hold it in reserve to use if the conditions of their waiving it should not be fair and reasonable and to the advantage of the community?

To re-establish wholesale exclusion would, I am convinced, be the worst possible way of dealing with the situation. To begin with, it would not work. It would simply create, in organised as well as unorganised trades, a confusion of interests in which the men would find the employers seeking cheap labour and combining with the women to gain it. The women have—and it is well to remember it—a distinct margin between their old and their new wages, and a still greater one between their old wages and the men's wages. With that margin, the employer would have scope to use his power as a bargainer and as an organiser of cheap labour, and he would be able to break through the solidarity of labour with effective force. And the women could not justly be blamed for accepting his offer.

What the male worker has to do is to find a way of knitting together the interest of men and women (they are really one if honestly faced) so that justice can be done with corresponding advantages to both.

The first step is to see how far the army of industrial workers is rightly recruited. Ought there to be all these men and women, boys and girls, seeking work? The answer is a simple and a negative one.

Take boys and girls out of industry entirely until they are fourteen and by successive steps, fifteen, and finally sixteen, and keep them

in school, where they rightly belong. And do not let the matter stop at that. Keep them there for at least part of their day until they are eighteen.

Turn next to the mother at work. The case here is not so simple, because passion has played its part in the old discussion of married women's work. I believe that compulsory exclusion has nothing to recommend it; but I believe that economic pressure on the mother to earn has nothing to recommend it either! The true solution of this problem has to be found in a revolutionary measure, the endowment of motherhood or childhood, whichever way you like to put it. There will be a beginning of this in the pitiful number of war orphans. They will be the little pensioners of the State. I think that this sad necessity of war shows us the right way. It would, if rightly extended, give a new life to children—a life in which their mothers would play a far larger share than of old. It would, this endowment of motherhood, give the mother back from the factory to the home, and free her for her desired tasks of home-making; but it would give her a new position since she would be there by free choice and not be the slave of a compelling restraint.

The industrial field would thus be relieved of a peculiarly necessitous and dangerous kind of competitor, and the reduction of the hours of labour and the discouragement of overtime would again help the situation. And it would help even in securing that increased productivity of labour which will be a necessity in the after-war world.

But while I feel very strongly that the total exclusion of women from the trades hitherto closed to them would be a mistake, I recognise that there are many processes and even trades in which it is not well that they should work. Health and general surroundings count for much, and it is clear to every observer in the industrial world that under the conditions of to-day the woman and girl worker does need protection against the exploitation of her health and character. There are trades, probably, which are not unhealthy, but may be described as unsuitable—a good euphonious term covering some real and many vague misgivings. It is of course not an ideal world that we live in, and human beings readily fall to low levels under hard conditions.

Physically, the objections to various trades are less difficult to define; and war-time experience has given us a mass of evidence as to women's capacity, which clears the position of many obscurities. Admitting, then, that the exclusion of women on these two grounds may be advisable in the interests of the whole body of workers as well as of the women, what method should be followed to define the limits of them?

If one way is more wrong than another, I think it is the method of the Trade Union rule where the Trade Union has a membership entirely male or almost entirely male. The sense of unfairness will never be lost if that method is to be adopted. The Trade Union rule may follow on investigation, but investigation should be made by a representative and well-instructed body. The Joint Committee

make, in their report, what I think is the best suggestion on this matter. They propose "the appointment of an Inter-departmental Committee, consisting of representatives of Trade Unionists (including women), of doctors (including women doctors), and persons experienced in the inspection of factories and the employment of women. This Committee would consider what employments may be harmful to women workers, and make recommendations thereon to the Government, through the Ministry of Labour and the Home Office. The Committee would become a permanent advisory committee, its reports, where suitable, forming the basis of legislation." This has also been agreed to in a resolution unanimously passed by the Labour Party Conference in January last.

Probably after the recommendations of this Committee had been made it would be sufficient to adopt Trade Union rules and not to have legislation; for clearly the matter is a changing one—new processes and new conditions may from time to time alter entirely the point of the decision. The Committee would be needed to revise its decisions as circumstances might be shown to have changed.

But the chief cause of exclusion, even when it has been expressed in other ways, has been the fear of woman as a wage cutter. There is good reason for this fear in the industrial history of the last hundred years. There can be no doubt that women have been the weapon by which over and over again wages have been lowered and processes altered to the workers' disadvantage. The woman and the unskilled male worker have stood in much the same position, but women have been even worse bargainers than the unskilled men. It is not because women are less capable as workers, but less capable as bargainers, less capable as organisers, less capable as industrial fighters, that they have been used to undercut the wages of men. And the reasons are not inherent in women; they have been the result of innumerable forces working against their economic, social, and political emancipation. The ideas of men about women which have been shared by women have weakened women's strength as industrial units. There has also been the whole group of facts which we sum up in the one word of motherhood, but which are many of them only the result of bad social and economic arrangements of the nation's life and in no way inseparable from the position both of wife and mother. I have a belief that so soon as we understand the causes we can set to work to bring about different results. For none of these disadvantages under which women have laboured as wage-earners are unsusceptible of modification. The will to alter them is the only thing needful, and the necessity under which that will shall find itself forced to act is now upon us. For the time has arrived when united action on behalf of men and women wage-earners can prevent the old reproach of blackleg being used to women in the future.

The chief difficulty, little recognised by the male trade unionist in general, has been the very low wages paid to women in the majority of trades in which she was employed. Sweated trades have been

synonymous terms with women's trades. The first necessity is to ensure that no worker, whether man or woman, shall work for a wage less than shall enable him or her to live a decent and a pleasurable life. The institution of a living wage, however, cannot be made by establishing at one sweep one level minimum throughout the country. That would be to rush upon disaster in two senses. It would either cause a sudden dislocation of industry—which the country could ill bear at the period of dislocation after the war—or it would establish a minimum which, if sufficiently low on the one side, would be far too low on the other. It would be at once a means of raising wages a little in bad trades but of lowering them in good trades. A far sounder method is to build on the already planned lines of the Trade Boards, placing under their operation every trade which does not normally pay a living wage to the men and women who work in it. Thus the means of levelling up, giving time for the trade to readjust itself to the new conditions and to profit by the productivity of the more efficient and better fed workers, so as to rise to progressively higher levels of wage-paying. But alongside these trades are the better organised and more skilled trades in which the normal payments have reached the level of a living wage. For these the question of the continued employment of women is more difficult. For in these it is that the difficulty of adjusting equal pay for equal work without lowering or endangering the standard rate is chiefly felt. The only way appears to me to be that recommended by the Joint Committee. They propose :—

"Establishment in these trades of Employment Boards constituted as under, and with the objects and powers described.

Constitution.—Equal numbers of representatives of employers and employed, the latter being appointed by the workers themselves, and including women as well as men. The chairman to be chosen from a panel drawn up by the Ministry of Labour. The Board to be called together by the Government, and supplied by the Government with secretarial and office requirements.

Objects.—To decide upon the conditions under which women should be employed in the trade, so as to secure economic equality between men and women workers. They would also have to consider how far the partially trained women who have been brought into the work during the period of emergency can be given an opportunity to gain further training.

The general aims of the Employment Boards would be to establish a minimum wage which would ensure to every worker, man or woman, the possibility of maintaining a decent and healthy standard of life.

Power to enforce decisions.—The decisions of such a body should be legally binding and subject to arrangements for revision."

This has been endorsed by the Joint Labour Committee, and seems to me to be of very far-reaching importance. It would cover by a system of Joint Boards the whole body of trades which have recently

admitted women into their more highly skilled and better paid branches. It would be the beginning of that joint control of industry within those trades which many of us hope will be an immediate outcome of the war, a joint control which shall gradually merge into the sole control of the people, acting through their organisations under the final control of the State. But that takes us into a realm of controversy which I need not enter here. The questions raised by the woman in industry are not so barren of controversial points that we need go seeking them !

These proposals complete the machinery, other than that of Trade Union organisation, which seems to me necessary. Organisation is a necessity if the suggested scheme is to work. The women, if admitted into a trade on Trade Union conditions—and such would be the result of the decisions of these Boards—must logically be admitted into full membership of the Trade Unions. But there is an undoubted need for special arrangements for organising women within the Unions. The same weapons of organisation, the same methods of educating the members, the same approach does not do for both sexes. The women and girls must be reached by women organisers if they are to be gained in full numbers. Especially is this necessary in the case of less skilled workers. They must have their own meetings, their own propaganda—the same in its ends but differing in its ways, and they must be brought into the task of taking responsibility and office in their own organisation. There must also be fuller representation of women by women on the governing bodies of the Unions.

The fact of the matter is that women workers have been in the past badly neglected by the male trade unionist. This is not in the least degree surprising—indeed, it was inevitable. The Trade Union had its set ways of working, and had developed for men under the guidance of men, and was not to be easily adapted to the differing methods needed to draw in the women. Efforts were often made that, after a momentary success, ended in failure. The poverty of the woman worker was the cause, first and foremost ; but there were other reasons, too. Discouraged by failure, the Unions, with hands full of more business than their officers, so largely voluntary and with a full day's work at other tasks, could get through, naturally found it difficult to make another attempt ; and there has been the fundamental difficulty that the sense of equality was not felt, though lip service might be given it at conferences and the like. The men have believed that women had a naturally inferior industrial position to themselves, just as the employers believed it ; in fact, the community in general accepted it. The war has so largely broken through that belief that it seems unlikely that it can ever be set up again.

There is this to be said for the women of this country : in strikes and other industrial battles women have been wonderfully firm and loyal, and that in spite of the severe privation from which they have so often suffered. There is a readiness to keep the solidarity of the ranks, especially in times of crisis. This has been tested and proved.

There has been far less reason for it in between times, because the men have themselves acquiesced in a division between the sexes industrially which has not favoured solidarity. Now it is noticeable that during the war period the solidarity of women of all classes has been greatly increased. Many women of the comfortable classes have gone into munition work. They constantly find themselves coming into the very closest and most sympathetic relationship with the working women who are their fellow employees, and this is so even where at the commencement feeling was very divided. The fact of this new solidarity amongst women has been pointed to as a danger for the male worker in the future. I think it is only so if the male worker chooses to make it a danger. The working woman will be always ready to join forces with him industrially, as she is ready to join with him socially. After all, the men and women are together outside the workshop, and it is not a difficult thing to bring them into a close partnership of interest and loyalty inside it. But there is a distinct tendency through the agency of welfare work, which is almost wholly looked at from the woman's side, to imply that the woman worker needs the welfare worker as the man needs his Trade Union. Indeed, that is one of the serious dangers in the present form of welfare work. It makes play with the undeniable fact that women are much more fastidious and more impressed by the comfort and cleanliness and social amenities of their workplaces than men. The danger can be corrected, however, by the Trade Unions taking a greater interest in these questions and insisting upon the replacement of the official welfare worker by the workers' own shop committee. But an attention to the amenities of the working-day life would do much to interest women in the affairs of their trade union branches.

The fact of the matter is that real solidarity has never yet been aimed at for more than momentary crises. Whenever it is, the men will find the women ready. In one great trade it has been partially gained already, and that because the wage demand of each sex has always been the same. I mean in the cotton textile industry. But even in that case the solidarity is only partial, because women have never yet claimed equal share in the management of the Unions or in the real control of their own affairs. They have been content to leave it to the men for so long that little short of revolution seems likely to alter that balance. But when it is altered, the men as well as the women will find it to their advantage—will find that the life of the Unions themselves will become more varied, many-sided and influential, touching on far more things than wages, and becoming imbued with a spirit of more than collective bargaining.

It is for that widening of industrial progress that I think we must work now in readjusting the relation between the men and women workers. With the settlement of the economic question are bound up many questions of social and spiritual meaning and significance. The freedom of the worker cannot be achieved unless the woman as well as the man is free. Just as the presence of a class of low-waged

black labour, industrially and politically backward, drags the white worker down to a lower level, so the drudgery of female labour in the past has dragged down male labour with it. And it has done worse than that: it has lowered the whole standard of life for the community, lowered the vitality of the mothers of the race, made thousands of women the prey of vicious living, kept the worst forms of slavery alive amongst us. With the passing of this class of industrial drudge into the better paid ranks of labour, and with the free admission of women into every trade for which they can fit themselves, with their attainment of an equal standard of pay with that of the male worker, and with the growing influence of their greater delicacy of mind and spirit on the industry of the world, there gleams before us a better hope than the past has shown of the development of a nation strong in spirit and body, in generosity and self-control, a nation which has grown in stature because it has been nourished on freedom.

In speaking on her paper, Dr. Marion Phillips said that her first point was the present condition of women's labour and the effect which the war had had upon industry. The good effects were infinitely more important than the bad ones; these were, the improvement in the standard of wages and the wide opening of industrial paths hitherto closed to women. In the past they had been restricted to the lower paid branches of unskilled and semi-skilled employment, to a certain number of highly skilled but badly paid employments, and to quite skilled and fairly well paid work in the textile industries; but in the last only had they been able to sell their labour on the same footing as men; still even there the best paid work was men's and not women's. During the war women's work had improved all round. It was not only that they had been admitted into every trade in which their strength and skill were sufficient, but the wages in the trades in which they had been accustomed to work had improved.

As to the future, the big question was what attitude the men, especially the men's trade unions, were going to take towards women when the war was over? The trade unions had the promise of full reinstatement of rules: under the old rules women were excluded in many cases, and the community were bound to see full restoration carried out if the trade unions demanded it. The trade unions should not give away one scrap of their rights until they were certain what they would get instead. But they ought to consider whether they would have the old rules reinstated entirely, or whether they could not get something better. In dealing with women they had to face realities, and consider the women's, the employer's, and the trade union's positions. They could not imagine that women would readily face a situation whereby they were totally excluded from a large number of trades in which they were fully capable of doing the work. In the margin between pre-war and war-time wages there was a very big scope for bargaining with women on the part of the employer, and he would not hesitate

to make good use of it. If the employer fixed wage-rates below the men's but above the old rates for women, it would be a difficult thing for the woman who was dependent on her employment to refuse to work for them. It was perfectly natural that men should see the danger of women's competition in undercutting wages, but that danger had been overcome in those unions which fixed the basis of payment as 'equal pay for equal work.' She saw no reason why that principle should not be extended throughout all industry, so that women would come in only with an equality of economic standing.

There was a point, constantly raised, over which there had been many bitter quarrels in the past—suitability—which was going to be raised again by one at least of the trade unions. It was claimed, *e.g.*, by the Vehicle Workers' Union, that 'bus and tram conducting was unsuitable employment for women. She thought that a trade union of which the vast majority were men should not be the sole judges of a question of that sort: it was a matter upon which evidence could be given—the body to decide the question should be representative of men and women, not only of the particular trade concerned, but also of men and women in general, doctors, and people with a knowledge of industrial employment generally.

The whole of the questions referred to in her paper required a change of outlook as well as system; and they had to look at the matter from a different point of view: not to go on saying that women were the people who undercut wages, but to give them a chance not to undercut. And the facilities for women to enter trade unions must be increased in every possible way, to assist in gathering in the unskilled and semi-skilled women in larger numbers. This was one of the root problems—no scheme for adjusting relations between men and women in industry would work unless both the men and the women were strongly organised. If men and women worked together in this, with the real intention of attaining unity, there would be more hope in the future than ever before.

QUESTIONS.

Question: Does Dr. Phillips not think that the war wastage has been, and will be, so great that there will be room for a great many more women in industry?

Answer: I do not think the war wastage will be so great as to materially alter the number of men seeking employment. On the other hand, certain women will not marry because the men they would have married have been lost, and there will be, in addition, a large number of widows. I think all will be needed in the first few years, but an

industrial slump may come, and we don't know how soon. If, however, we can carry out our hope of raising the part-time school age to 18, we have a very good way of preventing the market from being overstocked with adult labour.

Question: Would it not be a better suggestion, and more beneficial to the future of the race, than that just put forward, that all married women with dependents should not be employed in industry?

Answer: The greatest industrial reform we could have in this country would be to keep boys and girls at school for 20 hours until they are 18. The social and industrial effect would be enormous. It is inimical to forbid married women to work unless ample provision is made for them, and the number who would then want to go out to work is few; the desire of most women is to look after their homes.

Question: The lecturer said that wages before the war were 11s. and the present wages 20s., and that the employer would probably work on that margin to lower the standard. Does she think that women will go on being window cleaners, lamp lighters, and tram and 'bus conductors, or that the organised workers will submit to women being employed if a slump comes, so throwing a large number of men out of work?

Answer: The 11s. is based on the Board of Trade returns of 1911, and is rather a favourable figure. The predominant wage at present I calculate at about £1—without being dogmatic. A great many women will remain as conductors, but about window cleaning I do not know. Women have taken with great pleasure to the outdoor employments thrown open to them. If there is a slump, men will have a smaller chance of turning the women out.

Question: If motherhood were endowed, does Dr. Phillips not think that employers would calculate that in the family income, like everything else; and would not this tend to deteriorate the economic value of women?

Answer: I have not much fear of that, if the workers are well organised—employers are not all-powerful. If the workers care to use brains as well as hands, they can get what they like.

Question: Is it not our duty to keep women out of the factory more than in the past? Would not this be better for the well-being of the race and the nation?

Answer: Certain trades are not fit for women, and they ought to be kept out of these trades; but the question of suitable trades should be enquired into by a properly constituted body. Give women a

decent wage and enough to eat; it is absurd to think their poor health is due to the work they do: if they were fed properly they would be much stronger than most people think. They must not be treated as dependants, but as people of some value in the world.

Question: Is not the question of suitability of employment rather a question of the bad conditions which, if remedied, would make certain occupations suitable?

Answer: Better Factory Acts and better hours are badly needed for men *and* women, and men put up with conditions which they ought never to have put up with: it distinctly lowers the standard of life to allow these to continue.

DISCUSSION.

MR. J. G. NEWLOVE (General Secretary, Postal and Telegraph Clerks' Association):—

The impression that I got after reading Dr. Marion Phillips' paper was, here is yet another illustration of the fact that the war has now gone on long enough to produce its own platitudes, and one of these is that 'nothing will ever be the same again.' I doubt whether the war will have very much permanent influence upon the question of the greater independence of women. We have to be on our guard against drawing too hasty inferences from war conditions, as the conditions are totally artificial; and my first general criticism is that I think the earlier part of the paper tries to extract a greater measure of advantage in the direction of the effect of the war upon woman's future than the circumstances of the case really warrant. I think also her observation that the war has thrown woman more upon her own resources is not quite so well-founded as she would lead us to understand. I mention this because she draws an important inference from it—that the men having gone away to the war will teach women greater personal economic independence. Although millions of men have gone, there are still millions of men left, and one of the things which has struck me in my personal circle is that although, as Dr. Phillips says, woman's partner—her husband—may have gone to the war, there are still a number of men folks in the family circle at hand to give advice, with whom she can discuss her difficulties. Dr. Phillips has drawn a too lurid picture of the possible effects in thinking that this factor is going to help women towards a higher conception of independence in future. Much as we all wish it, I think we ought to be quite certain that we have the right facts concerning the matter.

I had a little difficulty when reading the paper to understand just what Dr. Phillips' real position is in regard to the question of women's wages. In one part of the paper one is led to believe that the matter of £. s. d. is much about the same as it was before the war; in another part one comes to the conclusion that there has been a remarkable improvement. After what she has said to-night, I have definitely come to the conclusion that she thinks there is not, on the whole, very much improvement, especially when she says that after all, what you have to consider is not how many shillings a woman gets, but what she can get for the shillings. If we consider it from that point of view we can very safely say there has not been any big upward movement in women's wages, such as we have been led to think, as a result of war experience. But even if there has been an increase in "real" wages—and I think there has—we have some important considerations to bear in mind. First, that woman—speaking of industry generally—is at the moment occupying more or less of a monopoly position, the competitive factor having been completely removed. If in these circumstances wages did not go up, we should wonder what had happened. The second point is—and I suggest it is an extremely important one—that wages of women for war work are ruling comparatively high as compared with women's wages before the war, for the very important reason that the employer of labour, as we generally understand him, is not paying that wage, but the State is paying it; and therefore we have to ask ourselves the very pertinent question: What prospects will there be of wages remaining at the war level after the war, when the State is no longer paying the wages but the private employer is called upon to pay them?

The war is being used by the extreme feminists as a lever for the demand that women shall be employed throughout industry irrespective of any conditions whatever. But perhaps it is not quite fair for me to assume that Dr. Phillips takes up that position. I want to oppose the view that women shall be employed in industry because they are women, and to make the suggestion that women shall be employed in any industry according to their suitability. I quite agree with Dr. Phillips that in order to get the problem properly tackled it is of the utmost importance that the women shall be consulted and shall have an equal say in the selection both of the industry and of the type of woman, but I strongly hold that to use the war as an argument for the employment of women here, there, and everywhere, irrespective of other conditions, is extremely dangerous from the men's, the women's, and the community's point of view. If I read aright the report of the Standing Joint Committee to which she refers—and all interested in after-the-war reconstruction should get a copy—they are at some pains to call attention to the extreme social dangers of the employment of women irrespective of the conditions governing the industry from the physiological point of view. I think we shall all agree that the higher women's wages can be brought, the better it is for the women and the better for the men, if the problem is approached from the

essentially sex point of view. We cannot afford to ignore that very important and difficult part of the subject, and I think all of us feel that in trying to tackle this part of industrial reconstruction we want to avoid as far as possible anything which will even have a tendency towards creating sex antagonism. If we do not avoid this we shall simply be playing into the hands of the employing classes, and we cannot afford to do that. While it may be an advantage that women's wages should show an actual upward tendency, I very much doubt whether it is an ultimate advantage to secure that at too high a price. I think we shall pay too high a price for it in the period of reconstruction unless the question of the employment of women is considered in a thoroughly scientific manner, because we have had sufficient experience during the war to make some estimate of the social dangers that will possibly arise as a result of the employment of women in particular forms of industrial life. There is not only the difficulty of physical strain, but also of mental strain, upon women; there is also the equally important problem of the effect upon children. According to all accounts there has been a marked increase of late of juvenile crime. Reports all over the country are showing that the absence of the mother in employment is reflecting itself in the actions of the children. That state of affairs is extremely dangerous.

Whatever we may hold about the present position and its probable effects, there can be absolutely no doubt that the experience of the war will increase the proportion of women to men in the community, and from that a number of very important sociological effects follow. The increase in disproportion of the sexes must have a fundamental effect, not only upon marriage, but also upon other matters which arise out of that state—for instance, upon family life, the growth of the population, the relations between the sexes from an economic standpoint. Also the experience of the war will mean that at its conclusion there will be an increase in the number of women requiring work for wages. It is very difficult to say, even approximately, what the number may be, but personally I rather doubt Dr. Phillips' estimate. I should not imagine that the number of extra women working for wages, based on experience up to date, will be anything like one million. We have to decide what I think are three very important questions: (1) the basis of suitable occupations for women's employment; (2) the type of suitable women for those employments; and (3) the basis of payment for the work which has to be done.

As to the basis of suitable occupations. My own view, for what it is worth, is that this problem could be solved with very little trouble. I think a careful study of the census returns for the last 50 years would help to solve the problem of the basis of suitability. We could safely conclude that the occupations which, according to the census, show a steady and persistent increase in the number of women employed are suitable occupations for the extension of women's labour. As to the second point—suitable women for such employments. I am treading

here on dangerous ground, and I shall probably cut right across Dr. Phillips' opinions, but my own view is that no married woman or widow with a family should be employed. I feel very strongly that the widow must be excluded, and the married woman with a family also, even if the husband is one of the unfortunate men disabled in the war. Looking at it from the point of view of the community purely I would insist that, because the future of the community depends upon the children, the community should see to the proper endowment of the mothers of our race. As to the basis of payment. On this point I confess I am somewhat disappointed with the paper. To my mind, Dr. Phillips has not tackled this difficult question, and I am sure she will agree that because it is difficult that is no reason why it should not be tackled. I thought she was going to deal with it when I read that part of her paper in which she refers to the importance of redeeming the promises to the men, while not doing anything, if we can help it, to injure the interests of the women. I think we must face it from the point of view that, as far as we can see at present, the pre-war standard for fixing wages as between men and women is likely to remain. The pre-war standard, roughly, regarded the average man as merely a channel through which a certain amount of money passed which was necessary to keep the community going. He was not paid so much per week purely and simply because he worked so many hours, but because he was looked upon as a person who was going to keep not only himself but several other people, while the average woman was not in that position. Before the war the situation was that the average man supported, roughly, five people, and the average woman one and a half people. We may be certain that as a result of the war that proportion will be disturbed, and that there will be an upward tendency as regards the responsibilities of working women. That fact alone would justify a reconsideration of the whole question of women's wages, but it does not get us away from the fundamental basis upon which wages of men and women are fixed.

Accepting the extension of women's employment in industries previously open to them and their introduction into industries previously recruited entirely by men, we are faced with the important question of maintaining, and possibly of increasing, the rates of wages in these industries. War experience justifies the conclusion, I think, that employers will not be eager to disturb the pre-war practice of paying women a less wage because they are women, and Dr. Phillips very rightly emphasises the importance of undertaking now the question of organisation. In this connection we should profit by experience and avoid the setting up of separate organisations on a basis of sex. Women should be encouraged to join the Unions on precisely the same conditions as men. They should enjoy the same benefits and undertake the same responsibilities. In my own organisation this has been so for years, and, on the whole, the results have justified the acceptance of dual membership. I thoroughly agree that both sexes should be adequately represented on the governing bodies of the Unions.

central and local, but neither women nor men should be elected because of sex, but because of their suitability. In a union with a dual membership, one of the chief dangers to be guarded against is that of the general interest being made subordinate to that of sex. Hence, while I do not disagree with Dr. Phillips when she says "there must also be fuller representation of women by women on the governing bodies of the unions," I urge most strongly that wherever possible women and men shall be elected to responsible positions by the whole membership.

I heartily agree with Dr. Phillips when she warns us to pay attention to the "agency of welfare work." We all desire satisfactory working conditions. Rest rooms for the men as well as the women, and all the other appurtenances which go to make our working lives more pleasant. But efforts are being made to professionalise welfare work, and the most effective way by which the Trade Unions can counteract this tendency is to pay greater attention to working conditions, and demand to be heard in regard to them. But this opens up the fundamental problem of industrial control which it would not be right to develop on the present occasion.

MR. STUART BUNNING (Postmen's Federation): In the Cotton Weavers' Amalgamation the difficulty of wages has been got over, and men and women receive the same rates—but the word 'rate' is very misleading. Men and women do not get the same money even in that industry. Are we to assume that in fixing rates we must have a system of piecework in all occupations? If we have bodies to assess the suitability of women and men for different classes of work, to fix wages, and so on, we are getting so near to so-called Scientific Management that we shall not know the difference.

MR. A. G. CARTER (Coventry Trades Council): The questions which Mr. Newlove says we must settle are women's questions, and they must decide them. The unions must realise that women are going to stop in industry, and if they are wise they will get them into the unions and use their power to get the same standard of wages and conditions for women as for men, and so eliminate undercutting and competition between the sexes. Whether women are to go to work is a question for them to decide. There are large numbers of married women in industry to-day who are there not for economic reasons but for the love of it, and they will stop there. The question should be looked at from a sensible point of view, regarding women not as inferior beings but as equals.

MR. JESSE ARGYLE (Working Men's Club and Institute Union): Dr. Phillips referred to the proposal of the W.E.A. for part time attendance at school for all children up to 18; I believe this is coming, and it would make a great difference in regard to employment for adults, not only in withdrawing children from factories and workshops, but

also in employing thousands of women for teaching, and many other developments in our educational system will absorb a large number of women. There are some employments not suitable for women; but bad conditions in factories are largely due to the apathy of the workers themselves. There is no reason why the conditions of the bulk of employments should not be made so good that they would be quite fit for women.

Mr. H. E. Clay (Leeds Trades Council): I think that the position taken up by the London and Provincial Vehicle Workers' Union, to which Dr. Phillips referred, was a fairly sensible one—that is, first, to secure the reinstatement of all old employees and, second, to argue that the conditions are of such a nature that the job is unsuitable for women. In this district, and more especially in Leeds, in normal times, there are duties extending over a period of 14 to 16 hours, and men have to turn out at 3-15 a.m., and sometimes earlier, to get to work; in certain cases they get two meals in about three hours, and then go eight hours before another meal. Taking this into consideration, and the stress of weather, I would not like my wife or sister to be employed at it. The conditions are wrong, but the conditions are in existence; and if women remain in the industry for a protracted period it will have a bad effect on future generations. I do not agree with total exclusion if women are paid the same wages as men for the same work, but this is not the case in any town in the country. I have a return from 90 towns where women are employed; in some towns they are getting the same rate, but less bonus; in the North, generally, they start at the men's minimum and stop there. There are 11,000 women at present in tramway work, and this will constitute a serious question for the men. We have no complaint except from the purely physical point of view, if they are treated not as women but as tramway conductors.

Miss B. Thomas (Postal and Telegraph Clerks' Association): I wish to dissociate myself from many of Mr. Newlove's remarks. In my opinion, the State are not paying the higher rates of pay earned by women nowadays. The only thing the men are entitled to do is to organise and to see that women do not undercut wages, and then the most efficient men or women will get the posts.

Mr. Edgerton (London Society of Compositors): Dr. Phillips has been quite candid in telling us what exactly is at the back of women's minds respecting the Government's pledge that trade union rules should be reinstated after the war. This is the first time the women's advocates have told us plainly and clearly that this cannot be, and apparently they are going to see that the Government does not keep its pledge. There is one great danger: the trade unions who were responsible for the pledge are very much depleted, owing to the enormous number of men called to the colours, and the women who are

now in industry have got there owing to national necessity. The big trade unions must consider what their members will say when they come back and find their old positions occupied by women, possibly at less wages.

THE CHAIRMAN: As no one has yet spoken for the textile trades, in which women are largely employed, and as I represent a society of which about 97 per cent. of the members are women, I hope that the conference will allow me to make a few comments. It is scarcely true to say that married women would not be in industry if it were not for the strain of economic circumstances—the facts are against it. Dr. Phillips admits that in Lancashire, in the cotton industry, the wages of women are high, and in that industry are the largest number of married women. She also said that women must be organised by women organisers if they are to be gained in full numbers, but the women have been more largely and better organised in the cotton than in any other industry in the country, and by men organisers. Further on she said that women, even in the cotton industry, have not claimed an equal share in management with the men. They have not claimed this, but they have the right when they care to exercise it—our committees and official positions are open to female members equally with the men, and they take their place on many committees with the men. On my own committee there is a majority of women, and they show as much intelligence and grasp of business as the men.

DR. PHILLIPS' REPLY.

To take the Chairman's comments first: the facts are not against me. In the cotton industry the trade union is the oldest one on a large scale in the country, and women were in that employment from the beginning, which creates a rather different situation from that of the mass of unskilled and semi-skilled labour that exists in other parts of the country. I quite agree that the cotton industry has organised the workers without having women organisers, but they have not yet succeeded in developing amongst the women that consciousness of the importance of trade union work that we would like to see, and this is reflected in the fact that they do not come forward to take the administrative posts. As to wages: I do not say that the prevailing wage for women now is about 20s., as there are far more women above that wage than there used to be above the old wage of 11s. The figure is not an average, but the figure at which the greatest number of women are paid—and there are a very large number above it. Women taking men's places are, on the whole, getting well above that rate; but of course the biggest increase of women in industry has been in the industries in which they were previously employed; so that while it is true that 20s. is not such a big increase when we consider what it will buy, the hopes of women are very much higher than ever because of the possibility of getting really big wages. In munition factories some are

getting £2 to £3, and even £4, and that is a very big change from the old idea, and I am quite sure that women's independence has distinctly increased. Now that women get more money they feel very differently about their work; they will not go back to the old position.

Some of you men are really hypocrites, and the women do not take you quite seriously when you talk about your great concern for us. The treatment of women, industrially or socially, by men in the past has not been such that women take so much notice of what you say on this score. If you honestly said "We fear you will pull down wages" we should have a great deal more respect for you. Of course women should not be employed on tramway shifts that take them to work at 3 o'clock in the morning, but that does not mean that all employment of the kind is unsuitable. Look at the employment that women take part in to-day—the horrible little sweat-shops, the abominable conditions under which they work, the tin box making trade and the jam factory, the long hours and the hideous conditions, for low wages for which they cannot possibly get enough to eat. Do you think these really compare well with tram and 'bus conducting? It is one thing to make a fuss about that—but if you made a fuss about the other as well I should have much more sympathy with you. As to the exclusion of women, it will not work, and is unfair. Do married women not work in the textile trades because of their economic position? They know their families can get a great deal more of the necessaries of life if they are at work than if they are not, and I do not think that the ordinary wage of the working man is so large that there is no economic necessity for the wives not to work. The vast majority of women do not wish to go out to work if they can get along comfortably in their homes without doing so, but there are women who are better at work than at home. Some find it better for themselves and their families to make a good wage at their particular work than to stay at home looking after children, which may not happen to be the job suited to their temperament: it is no more a fact that every woman is a good housekeeper and mother than that every man is a good painter. One other point—the plan set out in the paper is a fairly definite one as to the question of conditions in industry, and it is a practical thing to put forward, but it does not necessarily mean that because you say you want equal pay for equal work you must have piecework for everything. Men have time rates, and if the men in any occupation have a time rate you must also reckon what it shall be for women. Whatever plan you have in various kinds of work you can have the same plan for men and women; there is no need for any difference in practice. Such Boards as we suggest would be the best sort of body to decide what to do. In regard to Mr. Newlove's remarks, I do not think that you can say there was a definite pre-war standard for fixing wages between men and women. Wages were not fixed on such a definite standard, but the men protected their standard rate against the vast mass of unorganised unskilled labour, both of men and women, especially against women, by their general exclusion from the skilled

trades, and in future they will have to revise this. I want to be quite clear now. The trade unions have a right to the reinstatement of their rules, and it would be madness to give up a single one of the rules unless they were convinced that the alternative was good. One of the speakers rather implied that I had given away a deeply rooted plot on the part of women workers in this matter. I do not believe that there is one union that really thinks it would be to its advantage to get every single rule reinstated that they had before the war. What they have to do is to make a good bargain, and, as far as women are concerned, all we want is that women shall be admitted on a basis which will keep up the standard rate of wages for men and women.

THIRD SESSION.

THE PLACE OF AGRICULTURE IN INDUSTRY.

By Mr. C. S. ORWIN

(Director of the Institute for Research in Agricultural Economics, University of Oxford).

For some years before the great war the feeling was growing among the urban population of England that all was not well with our countryside, and this feeling may be said to have materialised for the first time in a constructive form during the Land Campaign of the present Prime Minister in 1909. It is not necessary to dwell upon the causes which led to the decline of British agriculture. In the main they are the outcome of a belief in the continuance of a condition of peace among the greater nations of the world, a belief which grew in strength year by year since last we were at war with our neighbours, and in proportion as the bonds by which the workers of all nations are united appeared every year to be drawn tighter. While peace lasted, and the sea routes remained open, we could safely depend upon receiving the half of our food supplies from abroad.

With the war it has been brought home to us, with a force that nothing but war could have given, that upon the freedom of these sea-routes depends our very existence. We have realised for the first time how the application of science to methods of destruction might, in certain conditions, bring us to serious want if not to actual starvation. Now that our belief in a condition of unbroken peace has been shattered, we are bound to consider the question whether our national policy will not have to be re-shaped upon a different foundation; and among the many after-war problems, nothing of greater importance than the reconstruction of rural life could occupy the public mind.

The only alternative policy to that of depending upon foreign countries for one-half of our food supplies is that we should grow enough food ourselves to make us independent in a crisis. Whether these islands could produce enough food to maintain the whole population under normal conditions is doubtful; but it is confidently asserted by those who have examined the problem that under a system of extended tillage we should have no difficulty in keeping the people of the country in a condition of reasonable health and efficiency even in the face of a complete blockade. Agriculture is not an industry in which changes can quickly be introduced. It took the Germans a generation to organise their farming so that they should be practically self-supporting in war-time even with a rapidly increasing population, and it will be years before we can get within measurable distance of the same position, even if we set to work for that end at once. But

if the maximum amount of land were to be gradually converted from pasture into tillage, not only would our normal supply of food be very largely increased, but immediately upon the suggestion of an outbreak of war a scheme of war-cropping, designed to produce the maximum of food for direct consumption, could be put into action.

However, the farmer is not likely to undertake the risk of an extension of his arable farming under the conditions which have prevailed during the past generation. Grass farming is safe and pleasant; it requires less capital and less labour than arable farming, and it is less dependent for success or failure upon the seasons. Thus, unless there are sufficient grounds for believing that the growth of the world-population, combined with the exhaustion of the supply of uncultivated wheat lands, will cause prices to remain in the future at a higher level than those prevailing in pre-war days, the conclusion is forced upon us that an extension of the tillage area of Great Britain, for the production of more food, will only be brought about through artificial stimulus. Nor can that artificial stimulus be applied simply by the condition of war-prices. Even with wheat at 80s. per quarter, and the price of bread advanced by 100 per cent., farmers have found it impossible, in a moment, to take advantage of the prices to grow more food. The labour is not there, the horses are not there, the implements are not there, and the technical skill is not there, so that to leave the breaking-up of grass until the emergency arises is to court failure. In dealing with this question of policy there must be no hesitation and no half-measures. If we are going to aim at increasing our own food supply to the extent of being self-supporting during a war, we must set on foot immediately some policy which will give the British farmer sufficient confidence in the market to induce him to bring about a re-conversion of large areas of grass-land into tillage.

It is for the working men of Britain to say whether they will apply this stimulus to the farmer, or whether they will trust to our ability to keep the sea routes open in all circumstances; the former course might cost the nation a few millions annually, the latter—if the trust were not fulfilled—might bring the people face to face with starvation. This is the greatest question, probably, which we shall be called upon to decide in the near future. It is a question particularly for the urban industrial population, for, as the Germans have proved, in a time of national scarcity it is the town-dwellers who suffer most, since no system of control can prevent the rural worker from consuming his own vegetables and putting his own fowl in the pot. Let the great industrial classes realise that they have got to face this question and to make up their minds what the national policy is to be. It has not yet been put to them plainly and forcibly, but there is no doubt that the sooner they realise the nature of the decision they have got to make, the better for their future it will be.

Whatever the decision to which the nation may come in this question of the reorganisation of agriculture from the outside, much is still waiting to be done for it by means of internal reorganisation before it

can take its proper place amongst national industries. That position can never be attained until farming can be said to be taking a much fuller advantage of scientific knowledge, both as applied to technical processes and to management, so as to produce more nearly the maximum of food for the nation and also to offer a better life to the worker. At the present time neither of these conditions is satisfied. We find that over far too large a proportion of the country the general standard of farm management is below that of the best farms, with the inevitable result that only a low standard of production is achieved and the condition of life of those concerned is correspondingly low. In this way the industry shows itself unattractive alike to the capitalist and to the worker to a degree which distinguishes it from all other industries.

It seems necessary, therefore, to examine the organisation of the farming industry to see in what respects it differs from that of other productive enterprises, and to what extent benefit might result from a reorganisation of the methods of agricultural production. We find that English farming is in the hands of a large number of small capitalists; some styles of management, such as fruit farming, call for a larger investment of money than others, such as sheep farming; but no man can embark on any kind of farm management in this country without capital, so that the industry is closed to the man who has nothing but his brains to invest. These small capitalists are men equipped for the most part with a high degree of technical knowledge in certain directions; they understand the handling of the soil, and know when it is in a proper state for cultural operations, and when these should not be attempted; they also possess that wonderful 'eye for stock' which enables them to appreciate differences imperceptible to any but those who have spent their early days on the land. But in other directions no less important to the full development of farming the farmer's knowledge is often much less complete. His training in the commercial side of his business is usually very inadequate; his knowledge of accounts is often so slight that he cannot prepare a statement of his financial position upon which his bankers could act in making him advances of capital, nor can he produce a profit and loss account upon which the Inland Revenue authorities can assess him to income-tax, while the fact that scientific book-keeping affords the only reliable means by which to control and develop an enterprise has never been realised by him at all.

Again, he is quite unfamiliar with the discoveries of modern agricultural science; the action of manures, the relative values of feeding-stuffs, the physiology of plant and animal life, the nature and control of animal and plant diseases,—all these things, important though they be, are quite outside the equipment of the average farmer. Moreover the prevailing system of weights and measures, and that of market customs, operate against the producer and too much in favour of the distributor. A bushel of wheat may be anything from 60 lb. to 72 lb.; beef and mutton are sold by the head instead of by weight, which

practice gives an enormous advantage to the butcher, who can test his judgment by the scales; and in one market in the Eastern Counties butter is still sold by the yard. Again, we find that in most parts of England the size of farms and of fields is such as to render the use of machinery difficult, if not impossible. Holdings are too small to warrant the investment of capital in labour-saving appliances, which would stand idle for the greater part of the year, and the sub-division of the farms themselves into small enclosures makes the employment of steam or petrol-driven machinery both troublesome and expensive.*

Lastly, under the present organisation of the agricultural industry we find that the position of the farm worker in most parts of the country compares very unfavourably with that of men engaged in other industries. His hours are long, his wages are low, his housing is often bad, his opportunities are very few, and the consequent difficulty of attracting men to the land, or even of retaining those already working on it, has become notorious.

In emphasising these weaknesses in agricultural organisation no slur is intended upon those engaged in the industry. Farming has been hampered by tradition to an extent unknown in other and newer forms of industry, and progress has been hindered by the difficulty of bringing together men whose occupations tend to keep them always apart, so that any form of combination either by the farmers or their men for the sake of their mutual protection or advancement is less easily accomplished than in urban industries, where all the parties concerned may be living within an area comprised in a few square miles.

Now there is a tendency to regard these weaknesses in agricultural organisation as being inherent to the industry, and most of the measures which have been attempted or proposed for their alleviation are based on a recognition of them as being something inevitable, only to be palliated so far as may be. Most County Councils maintain an official known as the County Agricultural Organiser, whose duty it is to bring to the farmer results of scientific discovery by telling him how to feed his stock and crops, and how to combat plant and animal diseases. The Board of Agriculture has put in motion machinery for the creation of live-stock societies, which bring the services of high-class breeding stock within the reach of small farmers; it has also made attempts, at various times, to establish State banking institutions for giving to the industry the financial assistance which farmers alone amongst producers have difficulty in obtaining. Lastly, the needs of the worker have been recognised, and attempts have been made to increase his income and provide him with the opportunity of rising in his calling by the statutory provision of allotments and small holdings.

All this work is very valuable, and much more of it is called for, but at the same time it is important to bear in mind that such work

* Few people realise the waste of land in this country caused by unnecessary fences. In Oxfordshire alone the roadside hedges occupy an area of 1,500 acres.

cannot be regarded as tending to remove the disabilities of the agricultural industry; it will certainly tend to mitigate them, but to rest content with efforts made along these lines is to rest content with a transitional and incomplete system of organisation. The occasional visits of the most skilful County Agricultural Organiser cannot supply deficiencies in the farmer's scientific knowledge, nor can adventures in speculative banking on the part of the State replace in a really satisfactory manner the farmer's ignorance of commercial systems. The provision of allotments, too, is a recognition of the inadequacy of the labourer's wage; and small holdings, though they may provide a stepping-stone to higher things for a few thrifty men, will do nothing to help the great mass of farm workers, who are bound to remain workers for wages all their lives. Changes intended to bring about a real improvement in farming must be more radical than these.

What we have to recognise is that agriculture is still an unorganised industry. It stands to-day midway between the small, self-contained and self-sufficing enterprise, run in the main to grow food for the occupier's household, and the industrial organisation under which the workers are catering for the market and looking to a monetary return to enable them to secure the necessaries of life. In an industrial country the former condition is an anachronism, and what English rural reformers have got to do if agriculture is ever to take its proper place in our national economy is to direct all their energies towards the evolution of a farming system based on large-scale production. It is generally accepted that in other forms of enterprise large-scale production is the only possible basis for organisation, and it is only by the adoption of this standard in agriculture that this country can hope to provide the maximum of food for the nation, and the greatest reward for the worker.

Let us see how this system would act as a solution of the problems already enumerated. The development of the large, industrialised farm would at once open agriculture as a profession to the man with nothing to invest beyond his energy and his ability. For nearly a generation State-aided agricultural colleges and the agricultural departments of the Universities have offered opportunities to men to equip themselves in the science and practice of farming, and numbers of young men have availed themselves of them. A few of these men who were able to command capital have started farming in this country, and others have found openings in the growth of a demand for specially qualified men to act as lecturers, as the need for instruction in agricultural sciences became more generally recognised. But the greater number of those without capital have been compelled to emigrate, either to those countries where land is to be obtained, or else to managerships in joint-stock enterprises engaged in some form of tropical agriculture—tea, rubber, indigo, and so on. Thus, the new and great force which should have been brought to bear on food production at home has been lost to the country. The English farmer does not employ managers, the scale of his operations would hardly justify this

course, and the landlord engaged in running a home farm is usually content to employ as bailiff a man who is nothing more than an elderly farm labourer, and who has had no opportunity of learning anything more than the practical side of farm work. Such a man, though not infrequently put in charge of farming capital running into thousands of pounds, rarely commands a wage of more than thirty shillings or two pounds per week, and the employer gets from him work of a standard corresponding to the standard of pay. With large scale production would come a demand for trained men to act as managers of departments and as scientific advisers, and many men who have that love of farming inborn in most people, but who never give a serious thought to its indulgence, would turn to agriculture as a profession just as they now turn to engineering and other vocations, and in this way a new and powerful force would be brought to bear upon the industry.

Not only would the technical management of farming be greatly stimulated by large-scale production, but the commercial organisation would gain enormously. The study of markets and of marketing would form an important branch of the work. The middleman is not always the rapacious exploiter of producer and consumer that he is so often represented as being, for not infrequently he is quite as ignorant as the farmer of changes in supply and demand which occur outside the narrow circle in which he moves; but however this may be, the big-scale enterprise would be to a large extent independent of him, and would be able to place its foods on the best market, while it would study simultaneously the questions of grading, packing, and transporting produce, the difficulties surrounding which are quite beyond the grasp of the small producer.

The financial organisation of urban industries could be applied equally to agriculture if the scale of operations warranted, and with the same beneficial results. The farmer usually dismisses the question of book-keeping with the remark that he has no time for accounts and no money to pay a book-keeper, and so in directing his management he is deprived of the great assistance provided by cost-accounting, nor can he make the eloquent appeal through the balance-sheet when seeking to finance his operations. It is the habit of farmers to obtain their financial help by taking long credits with their merchants and tradespeople, a method far more expensive than the risk demands, or than many of the farmers realise. The large-scale enterprise with its staff of accountants would find in its books the surest indications of profitable developments, and would be able to influence in the direction of English agriculture the flow of capital just now attracted to rubber-growing in the Tropics, or to other industries in all parts of the world.

The development of the large, industrialised farm should therefore go far to increase the amount of technical skill bearing upon agriculture, and thus to increase production. It should also reduce the cost. Just as the majority of our roads were laid out and constructed for slow-moving vehicles and light transport, and are in consequence

ill-adapted for modern conditions of locomotion, so the small farms and smaller inclosures into which the country is divided make it difficult for the farmer to take advantage of modern mechanical inventions. It has already been pointed out that the numbers of unnecessary hedges and fences not only waste valuable land, but also hinder the performance of mechanical operations. Another great hindrance in the path of the small farmer who wishes to take advantage of mechanical power is the fact that the scale of his production does not justify the use of his capital in these labour-saving appliances. The process of hay-making, for example, has been revolutionised during the last twenty years by the introduction of machinery, so that on the best farms the grass is not touched by manual labour from the time when it is cut to the time it reaches the mouths of the live-stock which consume it. At the same time, the great majority of farmers are unable to avail themselves of this process simply because the interest and depreciation on the capital invested in the various machines outweigh the saving of labour on the small areas to be dealt with. Farmers who are thus compelled to forego these results of modern invention are also deprived of another very considerable advantage which helps to make the use of machinery so valuable on the farm. This is the concentration of labour on any particular job requiring to be done at speed. No farm manager can control the weather, but the big organisation can make itself far less dependent upon it than the small one. It is a common experience on heavy land that the soil is too wet for ploughing in the late part of the winter, whilst a few days of dry weather will bake it so hard that no implements can work it. In the short time at his disposal between these two conditions, the farmer may have been able to do no more than to draw a few furrows across the fields, whereas if he had at his command the use of steam or other form of mechanical power, he could probably get the whole of the work done at the most favourable moment, working double shifts, if necessary, and even day and night.

We now come to the last and most important consideration of all, namely, the position of the agricultural worker under a system of large-scale production. Under the present system he is very largely a Jack-of-all-trades, badly paid and often badly housed. It is not surprising, therefore, that there should be a constant stream of migration from the country on the part of the younger and more enterprising men. While it is not possible or even desirable to check this movement entirely, the fact is recognised that the country should not thus be drained of the strongest and most intelligent of the men. Attempts to deal with the situation have had little effect; the result of the offer of allotments has been, as statistics show, that only where wages are unusually low is there any real demand for the allotment; the same would be true of the organisation of 'home industries' for labourers, and more particularly for their wives, for these are nothing more or less than 'sweated industries.' The advocates of these systems say, in effect, "we recognise that you cannot earn enough at agriculture

to keep yourself and your family by working all day, and our remedy for the situation is to offer you the opportunity of working half the night."

What, then, would be the position of the labourer in the large-scale enterprise? In the first place he could specialise; instead of being a Jack-of-all-trades and moving from one job to another he could attach himself to one department and stay there. As a specialist he would be able to command a better salary. It is a common experience in these days to see a small engine installed for working the barn machinery of the farm. It probably runs only for a few hours a week, and the man in charge can hardly expect to be remunerated as an engineer; on the large farm one man, or possibly more, would be employed continuously with the machinery, and would earn the pay of a mechanic. This opportunity to specialise would further provide the labourer with the chance, almost unknown at present, of rising in his profession, for there would always be a demand for foremen and even managers at the heads of departments, and these would be recruited from the ranks of the workers just as in any other industry. In this way the economic independence of the farm worker would be assured. On the big farm, too, combination for social advancement would be possible, and in the stir and bustle of a great enterprise much of the monotony of rural life would vanish.

A confirmation of the suggestion that large-scale production would increase the output of food per man, and would thus allow of higher wages, is to be found in the interesting paper by Mr. T. H. Middleton, C.B., on "The Recent Development of German Agriculture." In this article it is shown that the production of food per hundred acres in Germany is much greater than in England; on the other hand, if the number of workers be brought into the account, it appears that the production per man is fully twenty per cent. higher in this country. Now in England less than 16 per cent. of the land consists of holdings under fifty acres, whereas in Germany nearly one-half of the total cultivated area (48.5 per cent.) is made up of these units of production. It is fair to assume that the greater opportunity for the employment of horse labour and machinery on the larger holdings in this country contribute to make the English farm labourer a more efficient workman than his German equivalent, and that any development which will increase still further the opportunities for using machinery will make the labourer's toil still more productive. The comparative rates of wages in the two countries provide further proof, unless, of course, the German farmer is able to retain a greater share of the profits of agriculture. With the increase in the efficiency of labour, and the consequent rise in wages, would come the solution of the housing problem without resort to uneconomic means, for so soon as the farm labourer can offer a commercial rent for his house, the small investor will not be backward in supplying the demand.

The objections to the factory principle from the point of view of the social and intellectual well-being of the worker will at once occur in

considering the policy of industrial development which is suggested here as the means of giving agriculture its proper place amongst our national industries. But whilst the utmost care would be needed in steering clear of the many pitfalls which would beset the path of the organiser for big-scale production in farming as in other things, the farm manager would have the advantage of the experience of the great trades and trades unions to draw upon, and to help him to set his course fair. Moreover it must be remembered that agriculture, however highly organised and scientifically managed, would of its very nature be free from the monotony which tends to become inseparable from 'scientific management' in industry. The work in the open field, changing with the seasons, the daily association with the live-stock, in fact, the close contact with nature in every form,—all these things will make it impossible for the farm worker ever to lose that personal interest in his work which every man must feel if he is to make the best use of his training and of the qualities born in him.

The industrialisation of agriculture has therefore possibilities such as no other industry can afford, for while the development of large-scale production would allow full scope for the brains and energy of the business man, it would not be attended by the disadvantages which follow upon industrialisation in large towns. The moment has come when the inadequate production of the country, and the pressing need for improvement, have been brought home not only to those concerned in agriculture but to every man and woman in England; and if full advantage is taken of the opportunities which this realisation brings, the whole organisation of farming will be so reconstructed as to make it one of the most profitable, as well as one of the most attractive of professions.

In speaking on his paper, Mr. Orwin emphasised once more the two points: (1) that it was for the nation as a whole to consider the questions relating to the increase of our home-grown food supply; (2) that a complete reorganisation of the industry itself was essential for its success. He urged that both these points are a matter of national policy, and that particularly in regard to the former it rests with the people to decide upon the form of policy which is to be the solution of the agricultural problem. The country can only become self-supporting in time of war if the tillage area is extended, and this will not be undertaken unless the market outlook for cereals is more attractive to the farmer in the future than it has been in the past. In ordinary times the farmer would not produce sufficient food, but in the face of a situation like that of to-day it would be possible, if we had the extra tillage, quickly to inaugurate a system of national farming by which we could maintain ourselves for several years. We should give up to a large extent producing foods consumed by stock to make meat, and produce more food directly consumable by the population, living largely upon our

cattle—that is, our capital invested in live-stock; and by this means we could make ourselves self-supporting for a very considerable period. At the present time it takes about 6 lbs. of corn food to produce 1 lb. of pork. In a time of emergency we should aim at eating as much of the corn ourselves as possible and live upon our stock of live-stock in the country. He thought that during an emergency we could look forward to making ourselves quite independent of imported foods during a time of complete blockade, if we had a larger area of arable land. The nation must decide whether it will face the risk of an interruption in its imports of food, or whether it will try to secure itself by stimulating home production by some form of permanent guarantees, such as the temporary measures recently promised by the Prime Minister.

QUESTIONS.

Question: Is it possible to turn grass into arable land and still produce milk?

Answer: It has been demonstrated many times that, by the readjustment of farm management in particular cases, arable crops can be grown and dairy farming carried on successfully.

Question: Does the lecturer think that large scale farming would be as productive as a comprehensive system of small holdings with implements and distribution worked co-operatively?

Answer: I am a warm advocate of co-operation, but anything done with small farms organised co-operatively could be done as well, or better, with large farms. There would be the difficulty of the simultaneous demand for implements owned co-operatively—everybody would want them at the same time.

Question: The lecturer said that the housing question was one of low wages. Having regard to the enormous amount of money required for higher wages, does not this lead up to nationalisation of the farming industry?

Answer: I am sure that it is a question of wages. The landowner will tell you that he cannot afford to build cottages for 2s. 6d. a week rent, and labourers cannot pay more. Of course nationalisation may come. Any policy for the development of farming must depend for its success upon the way the people in the industry come into line. If they don't come into line, we shall have to have nationalisation.

Question: Would industrial farming increase the number of people employed on the land if machinery and implements were extensively used?

Answer: I think so. You would need more people to deal with it. But it is doubtful whether you could get a largely increased population on the land without resorting to uneconomic means of production. You might by returning to spade labour, but this would reduce the standard of living very considerably.

Question: As capital can get a better return in other industries, how can it be induced to come into farming?

Answer: The statement that other industries pay better cannot be supported. I should say that there are few better-paying industries than farming.

Question: Then how do you account for the lack of capital?

Answer: By the lack of commercial organisation.

Question: Are there any statistics to show the amount of money earned in farming at the present time, and are these earnings on the increase?

Answer: There are no statistics; but I think the upward move in prices shows that farming must be becoming more profitable. I have some recent figures showing the net returns per man employed in agriculture, which give a total of about £130 to £140 per year.

DISCUSSION.

MR. ALDERMAN R. MORLEY (Workers' Union):

I am one of those who have only had contact with the land on the lines which Mr. Orwin has condemned, as I had the misfortune to be born in an agricultural district. In the latter part of the paper he says that, however you organise agriculture, you will never, in his opinion, get the workers in agriculture to be so uninterested in their work as the worker in the factory and the mill; this is the difference between agriculture and all other undertakings, and, because of this, I think the suggestion of large scale farming is not the wisest suggestion. Our outlook has to be governed by the fact that we are living on an island, that our area is restricted, and that therefore intensive culture would appear to be necessary rather than large farm culture. All the improvements of the latter can be got by co-operation.

Mr. Orwin mentions the fact that we have a lot of waste land owing to hedges—you can do away with hedges under co-operative farming, just the same as under large farm production; that is a question merely of detail, and is not affected in the ultimate utilisation of the land to the best advantage. The objection that implements co-operatively used would be wanted by different people in the co-operative society at the same time is answered by the fact that just the same machinery for the same acreage would be needed on a large farm. In very many parts where reasonable effect has been given to the Small Holdings Acts the co-operative use of machinery has been and is being worked to advantage. He also contends that, even with co-operative use of machinery, during a large part of the year the machinery would be idle—it would be just as idle on the large farm. Generally speaking, the two things that seem to make the paper hardly the best solution for our present problem is that farming is quite a different undertaking from all other enterprises because of the effect of contact with the land upon the worker, and that whatever benefit can be got by large farming can be got by co-operative farming properly organised.

I think that the failure of farming is caused by the lack of permanency in tenure, and it is no good endeavouring to find a solution under private control; it is absolutely futile so long as an ordinary person can use or misuse the land in our restricted area to suit his own whims, fancies, or financial outlook, regardless of the welfare of the people. Our first care should be to restore the land to the nation—no artificial rules or orders of this system or that policy will be effective unless the nation owns and governs its own area and the policy is dictated from that standpoint.

I think the principle behind the large farm idea is wrong: a nation should not organise its agricultural industry on the basis that somebody is going to make a big profit, but it ought to organise its food production on the lines of its national needs, for the building up of its national life and to keep us together as a nation. It seems to me that we are pottering about and tinkering with half-measures instead of getting to the dead bottom level, making the land serve the people and not pay John Smith 10 per cent. or 20 per cent.

Then with regard to the question of housing: it is perfectly true what the lecturer said. The farmer cannot afford to build and get only 1s. or 2s. 6d. rent—but why cannot he? Because the foolish fellow does not pay sufficient wages. He wants wages low, so that he can put his produce on the market and get a good profit; and if he invests money in cottages he also wants a good return on that. The whole thing is preposterous, and, as a nation, we have to realise this one great essential—at any rate if we are going to continue as a nation—that the land must be the people's and must be used for the people; and that the principle of production for private profit must go, and the policy be introduced, whether it be co-operative or otherwise, of giving the man who is doing the actual work the direct reward

for his labour without the interposition of capitalism. Whether we are going to have large farms or small co-operative farms—whichever policy is pursued—the anomaly which exists to-day must be removed. Let us make ourselves self-supporting as a nation, and produce our commodities for the well-being of the community and not for private profit.

Mr. A. E. Mabbs (Coventry Trades Council): I was surprised to hear a plea for the uprooting of the present system of agriculture in one part of Alderman Morley's speech and a plea for small holdings in other parts. It seems that some people are unable to learn from the past experience of this and other nations. We are intimately connected through the war with a country which has tried small holdings, not for a few years, but for generations, and there is not a more gigantic failure in the world: the small holdings in France are made to pay, more or less, but as a matter of fact they are mortgaged up to the hilt—they are made to pay only by the labour of children from a very early age. I do not desire our working class to enter into conditions of that kind. We shall have to apply the same methods to agriculture as have proved successful in all other industries—that is, of large concerns properly organised and managed. We shall get the best results by getting the best brains to specialise.

Mr. Stuart Bunning (Postmen's Federation): It does not appear to me that these problems can be dealt with except by bringing in the State. Nationalisation will not solve everything, but when dealing with the necessaries of life for the people, there is great reason for the State to step in and to see that proper measures are taken. I had an exhaustive enquiry undertaken as to housing conditions in rural districts four years ago, and found that in a good many cases the reason for insufficient housing was not because it would not pay to build, but because the landlord would not sell the land. This difficulty again brings us back to nationalisation.

Mr. Liddall Bridge (Working Men's Club and Institute Union): The difficulty is that, before you can deal with the land you must get possession of it, and at the present time that is impossible for the ordinary man in certain parts of the country, because of the custom of so-called "entail." Generally speaking there is no such thing as entail in law in this country at the present time. If a landlord has property, he has only the right to settle that property for life and lives in being and for 21 years after. But he gets out of the difficulty this way: if he has a son, he can leave it to him and to his child when he is 21, but he can do no more; and when the grandchild is 21, his father will say to him "If you do not resettle this land, I will let you starve." That is why we have what are called compound settlements. The time has come when the land should be made free in order that tilling could be made successful, and so that a man should

have a chance of looking forward to the time when he will be his own landlord, because if he has that ambition he will put his best into the land.

Mr. W. B. Neville (Royal Arsenal Co-operative Society): We are all anxious to see a larger number of people employed in the open air, and to stop the drift from the countryside to the town, but if we have large farms the number of people employed will most certainly not be increased. I prefer a system of small holdings, co-operatively arranged and administered, or, if you like, supervised by a Government Department. The absence of compulsion in agricultural administration will have to be remedied. To-day the farmer can grow what he likes, or, if he likes, let the land go out of cultivation or use it for pleasure, and there is no Government Department to say that he shall not do so. Agricultural reformers tell us that we cannot make a man grow this or that, and that it would be impossible to apply compulsion. But during the war this is the only industry where compulsion has not been applied on a large scale. If the millers are told what to do, and the bakers, who turn the produce of the farmer into food, what to bake, then it is all the more necessary that we should see that the farmer grows what the country desires.

Mr. A. Stacey (Mexboro' Trades Council): The whole solution lies in removing the influence of the landlord. In many districts the terms of the tenancy impose conditions as to cropping the land upon farmers. The landlord has no right to decide the crop to be grown, and under State control he would have to be satisfied with fixing the rent only. The land should be used from the point of view of the people, and not from that of those who simply draw the rents.

Mr. H. E. Clay (Leeds Trades Council): I am rather struck by Mr. Orwin's point that we could not produce all the food we required, but that we could adopt a system which would allow of modifications to enable us to meet a crisis like the present one. I do not know what position Mr. Orwin takes up as to whether it would not, after all, be better as an alternative to use those portions of the world which are best adapted for growing certain things, placing such regions under international control.

Mr. Orwin's Reply.

Mr. Morley's opinions and mine are really not very wide apart, as nearly everything that can be carried out with small holdings can be carried out by large scale production. Nationalisation I will not touch upon. As regards freehold: if you imagine farmers going into farms of 5,000 or 10,000 acres, surely the first thing they would want would be the freehold; a combination of individuals to work an industrial

farm would require this before putting in their capital. As to co-operative organisation: this, I think, would have a better effect on large than on small farms; the hay-making machinery could not be used all the time, of course, but the one-acre man is obviously at a disadvantage compared with the 500-acre man; and if you have 500 one-acre men you would have to move the machines about from place to place, to an extent not necessary on a large farm, and thus lose a great many quarter-days. Co-operative organisation could be just as successful on large farms as on small holdings. As to the French holdings: I had a conversation with a Belgian gentleman connected with the Ministry of Agriculture in Brussels before the war, who told me that the best element in the Flemish population was the small-holders—they were no trouble at all, and were a very fine race. 'But,' he said, 'in another 50 years there will be none. In England you have your manufacturing industries and your Colonies, and you cannot hope to extend small holdings for that reason. Our people are brought up to work on small holdings, but as soon as they realise what can be done with an emigration ticket, we shall lose the lot.' I am still of the same opinion as to housing. I am sure it is a question of putting the agricultural labourer into such a position that he can pay an ordinary rent for a house. As to the question of policy in dealing with the farmer: the report of Lord Milner's Committee of 1915 on the Increase of Food Production was the first occasion when guaranteed prices were recommended, and in that report the suggestion was made that, if this policy were carried out, the whole of the land of the country should be scheduled and farmers should be instructed as to what they should produce; but such a policy could not be adopted without giving the farmer some guarantee. As to the landlord question: two hundred years ago landlords played a bigger part than they do now, and that is the explanation of those clauses in farm agreements telling the farmer how he must farm, to which one speaker took exception. Originally they were not framed with the intention of restriction, as the landlord was then the best farmer in the district, and he was simply giving the tenant the benefit of his experience and helping him to the best advantage. Although there are plenty of good landlords nowadays (which is a fact that some people overlook) we know perfectly well that, taking them on the whole, they do not occupy the same position in agriculture to-day. The last Agricultural Holdings Act removed the effect of that clause restricting cropping, and at the present time the farmer has absolute liberty to grow on his land what he pleases. The landlord is, as a matter of fact, in rather a curious position: he is being told to play a larger part in agriculture, and yet, on the other hand, every change in legislation makes it more and more difficult for him to take any active part in agricultural development. I am sorry that speakers did not deal with the question of a policy for the nation with regard to stimulating production. I hoped that some of you would have dealt with the question of guaranteed prices, and subsidies, and other unsound things which

some people think necessary. I do hope that although you have not discussed these things here you will do so afterwards. The organisation of the farm affects the workers on the farm, but does not affect the nation: whether we are going to increase our home production affects us all, and vitally. Mr. Clay suggested international agreements to organise the production of the world so that every part produced what it was best fitted to produce. Can we depend on international peace and international agreements? Is it better to take that risk, or to adopt some otherwise uneconomic methods to make us independent of international alliances? The demand must come from you if anything is to be done.

FOURTH SESSION.

THE POSITION OF THE RURAL WORKER IN INDUSTRY.

By ARTHUR W. ASHBY

(Late Research Scholar in Agricultural Economics under the Board of Agriculture).

Agriculture is still our greatest industry, but, strange to say, it is yet organised on the small-scale system. Further, it has been to some extent in a state of decline, and the prevailing conditions made it necessary to run businesses on a system of low costs. Thus its employees have suffered from all the disadvantages of a small-scale industry, while enjoying few of the supposed advantages of such a system. During the last thirty years the employees of most farms have not obtained opportunities for becoming craftsmen or developing craft skill and ideals in any greater degree than most factory employees. On a few farms where high class live-stock has been bred or reared, or where vegetable and fruit growing has been developed, and on a few dairy farms, or yet a very few mixed farms on which the manager retained some ideals of cultivation, opportunities for developing craft knowledge and skill have been open; but even on these farms remuneration has not always increased with skill and knowledge.

The prevailing sizes of English farms are indicated by this table:

Size.	Number.	Total Acreage	Average Size in Acres.	Proportion to Total Acreage.
50 to 100 acres	59,514	4,340,952	72	16.01
100 to 150 ,,	31,860	3,940,343	123	14.53
150 to 300 ,,	37,615	7,848,424	208	28.95
Over 300 acres	14,413	6,698,221	478	24.70

The number of employees varies with the type of business, but on an average 4.8 persons, including farmers, are engaged on one hundred acres.

Excluding farmers and their relatives, and women, approximately three men per 100 acres are employed. On the smaller farms the relatives of the farmer supply a much larger proportion of the labour

than on the larger farms. Thus, taking an average, employment on farms will be approximately as follows:—

	Men per farm.	Total.
59,514 farms of an average of 72 acres	1	59,514
31,860 ,, ,, ,, 123 ,,	3	95,580
37,615 ,, ,, ,, 208 ,,	6½	238,094
14,413 ,, ,, ,, 478 ,,	15	216,195
		609,383
Total Males employed in Agriculture in England and Wales, 1911		609,105

Where a high ratio of capital is employed, as in the case of commercially developed vegetable and fruit production, or sometimes in dairying, and on good arable farms, the number of men employed per 100 acres will be much higher than the average, and on poor farms, especially poor pasture, the number will be very much below the average, and on the poorest pasture farms may fall to one man per 100 acres.

Under such conditions the rural worker is both industrially and socially scattered and isolated. Men work in small groups in which there is very little standardisation of the conditions of employment, hours, rate or standard of work, wages, or perquisites. Conditions vary in detail from farm to farm even within a given district, and they vary in important particulars from district to district. As a result of the social isolation there is very little opportunity for close comparison of conditions or of the results of those conditions either by employers or employees. In one district a custom of Saturday half-holiday may be established with good results, but in another district within fifty miles distance labourers are backward in making a demand for such a concession because they cannot see how it could be arranged, while employers would deny that it is possible to arrange for such a concession.

But the prevailing size of farm businesses presents obstacles to the progress of the rural worker of fundamental importance. In particular it limits the employment of machinery and power, while providing few opportunities for developing craft skill, and provides little scope for progressive advancement of the worker. The small application of machinery and mechanical power to the production of comparatively small farms results in a low rate of production per man. In 1907 it was estimated that the value of the annual production of British agriculture amounted to only £90 per person engaged. The output per man in many other industries amounted to a much higher figure. The average for all industries in England and Wales, including those in which over 50 per cent. of the employees are women, in which production is low, was £104. In some industries the value of production per person amounted to nearly £200 per annum.

If this difference in relative production remains, the best possible system of the distribution of wealth produced in agriculture can never

make the condition of the agricultural worker equal to the standard of workers in other large industries. But it is worthy of notice that the rate of production per man in British agriculture has been rising during the last thirty or forty years. The total production of agriculture fell slightly, perhaps ten per cent., between 1871 and 1911, but the number of persons engaged in agriculture declined by about 30 per cent. during the same period. As a result it was possible to slightly increase wages and to shorten hours even while prices were rapidly falling.

The maintenance of production while agriculturists were declining in numbers was made possible by the adoption of machinery. During the last thirty years of the nineteenth century nearly all implements and machines employed on farms became more efficient and adaptable, and the increased use of machinery for harvest work made possible a considerable economy in human labour. In particular, harvesting machines did away with the necessity for a large amount of casual labour, thus regularising employment. Further application of machinery and power will be necessary if the standard of production per man is to be raised. The small farm does not provide the ideal unit for the application of machinery and power. On small farms, too, the farmer and his family occupy all the positions of management. In agriculture as now organised there is very little scope for specialisation of function either in management or labour. The boy who begins work on a farm at the age of twelve or thirteen years generally reaches the maximum of his advancement at twenty-five or thirty years of age, sometimes before. He may begin with odd work in the stable or yard, sometimes as a boy with a team. As he gets older he is trusted to work horses himself. Perhaps later he may change his employment and become an attendant on cattle, or he may in many counties become an ordinary day-man or 'dataller.'* After the age of twenty-five a few men who have gained experience obtain positions as shepherds, head-stockmen, or head-carters; but on farms up to 200 acres in size these positions do not carry much responsibility, and consequently little advance in economic or social position.

A few other labourers may advance to the position of farm foreman or bailiff. The number of these positions open to men was increasing from 1851 to 1901, but has since slightly declined. In 1851 the number was 10,561; in 1901, 22,623; and in 1911, 22,141. The increase in the number of these positions has been primarily due to the process of 'laying farm to farm,' by which separate farms, often lying at a

* The preponderance of 'ordinary labourers' is shown by the Census classification of males engaged in agriculture (England and Wales, 1911):—

Farmers and Graziers	208,761
Sons and Relatives	97,689
Farm Bailiffs and Foremen	22,141
Shepherds	20,838
Cattlemen	69,094
Horsemen	128,122
Not otherwise distinguished, or 'ordinary labourers'	425,063

distance apart, are occupied by one farmer, who needs a foreman on the farm distant from his residence; and to the increase in small residential estates, the owners of which employ a bailiff to manage the land connected with the residence. The decline since 1901 may be due to the return of some farms to separate occupation. This development has undoubtedly created openings for some intelligent labourers, but the proportion of foremen and bailiffs to total employees is very small, and some of the positions are held by persons who have been farmers, and their sons.

With agriculture organised on a small scale it might be presumed that extensive opportunities would arise for the erstwhile labourer to obtain control of land and capital. This has not proved to be the case. The proportion of labourers who can, apart from the Small Holdings Act, become small-holders or farmers, varies in different counties. In some parts of Devon and Cornwall, where farms are small, as many as 40 per cent. have been labourers or are the sons of labourers; but taking England as a whole at least 70 per cent. of the farmers are of farming stock—*i.e.*, descendants of men who have been employers in agriculture—and it would be rash to assume that the other 30 per cent. had been labourers or were the sons of labourers. Many, perhaps most of them, are sons of other inhabitants of the countryside, particularly of tradesmen whose business is connected with agriculture. As distinct from farms, small holdings that have come into existence independently of the Small Holdings Act vary in number and proportion in different counties, the proportion being high in such counties as Cornwall, Cheshire, Lancashire, Holland division of Lincolnshire, Staffordshire, Cambridgeshire, and Bedfordshire, where either dairying or market-gardening fostered these holdings.*

Since 1908 the number of small holdings established by County Councils has also varied. In some counties the number of holdings would provide opportunities for advancement for as many as 6 or 7 per cent. of the labourers, in others less than one per cent. These holdings, too, tend to be more numerous in the market-gardening and dairying districts. But not nearly all the old small holdings or those recently established are sufficiently large to support a family. Taking

*Number of Small Agricultural Holdings in England and Wales, 1915.

Size.	Number.	Acreage.	Average Size in Acres.	Proportion to Total Acreage.
1 to 5 acres	91,570	282,980	3	1.05
5 to 20 acres	121,698	1,366,990	11	5.04
20 to 50 acres.....	78,454	2,636,094	33	9.72

In the most numerous groups of small holdings, between one and five, and five and twenty acres, there are many which cannot be classified as agricultural units. A study of 360 holdings in Oxfordshire showed that only 32 per cent. were genuine units in agricultural production. The others, while producing crops, were run as adjuncts to other businesses. Also, many holdings in these classes consist solely of pasture let as 'accommodation land' to tradesmen and others. Some of the holdings in the 20 to 50 acre group are in practice attached to other holdings, thus constituting a medium-sized farm.

the country as a whole the Small Holdings Act has not provided opportunity for more than 3 per cent. of the farm labourers to become controllers of land, even if all holdings were occupied by erstwhile labourers, which is not the case. The majority are occupied by men who were not farm labourers previous to obtaining a small holding.

Perhaps some 4 per cent. of the labourers can actually become small holders, and a few become larger farmers. Also about 2 per cent. can become bailiffs or foremen. But in any case not more than 7 or 8 per cent. can rise to positions of control of land and capital, while they remain in the industry; and for the majority of the remainder their positions and earnings are fixed by the standard of the class they attain by the age of twenty-five or thirty years.

The 'agricultural ladder' which has been talked about since Mr. Chamberlain began his land campaign in 1885 has not been realised, nor are there any signs of realising an 'agricultural ladder' which would be open to even half of the labourers. The lower rungs of that ladder were supposed to be allotments and small holdings; but the allotment came into rural economy to provide a means by which the labourer could turn his leisure to account and thus obtain a subsidiary source of income to eke out the insufficient income received in the form of wages. The demand for allotments in rural areas was always most keen where wages were lowest and employment most irregular. As employment is regularised or wages tend to rise there is a tendency amongst labourers to relinquish their allotments. The demand for small holdings, also, depends to a considerable extent on the rate of wages. It is not most keen where wages reach the lowest level, because in those districts there is no surplus of income from which to save the capital necessary for even the smallest holding. However, a study of the demand for small holdings since 1908 has revealed the fact that the demand is comparatively small in the districts in which rates of wages exceed the average. The average earnings of ordinary agricultural labourers in 1907 were 17s. 6d. per week, and dividing the counties into groups in which earnings are above and below the average it is found that only 15 per 1,000 labourers have applied for small holdings from 293,000 labourers in counties in which earnings exceed the average, while 25 per 1,000 have applied for holdings from 294,000 labourers in counties in which earnings are below the average. If this diagnosis can be trusted, it tends to show that an improvement in the general conditions of employment would be more welcome to the rural worker in general than the offer of small holdings.

The conditions under which small holdings are obtained and worked might be made easier by changes in the law and its administration, by the provision of capital and the organisation of co-operative systems, and these changes should be secured for workers who are keen to obtain control of land and capital and capable of managing them. But no extension of small holdings which can be foreseen will radically affect the position of the rural worker. In 1911 there were nearly 500,000 men over the age of twenty years employed in agriculture. Under

most systems of cultivation an area of about 25 acres is necessary to provide for a family; and to provide holdings of this size for this number of men would require nearly half the cultivated area of England and Wales. It is, however, almost impossible to imagine the establishment of even 100,000 holdings, and such a miracle would still leave the rural workers without any solution of their general problems.

There are, too, many reasons for caution in the process of establishing small holdings. Chief of these is that production is apt to be more costly, especially in human labour, on small than large units. The production per acre is generally higher on small than large farms, but production per man is usually much lower; and it is upon the production per man that the standard of living of the actual producer ultimately depends. Also, the general position of the rural worker is somewhat weakened by the establishment of the keenest and most intelligent workers on holdings of their own, for this tends to rob the class of its natural industrial leaders. The small holder often remains the political leader of his associates amongst the labourers, but his industrial interests change to some extent on his becoming an independent cultivator.

So long as the great bulk of the land is cultivated in units on which hired labour must be employed, and the majority of the workers must be employees, it is to the advantage of the worker, the farmer, and the nation to retain the better class workers on the larger holdings.

The question of rates of wages will not be ultimately settled even if legal minimum rates become the reality they promise to be.* There will be constant necessity for adjustment of details, and if minimum rates are to accomplish the aim of retaining population on the land

* Previous to 1914 a good deal of attention had been given to rates of wages earned by agricultural labourers, and there should be no need to give figures. Since 1914 the changes in the rates of wages have varied considerably. In some districts with a large proportion of labourers over forty years of age the changes have been slight and tardily made; in other districts where a large proportion of young men were employed the changes came more quickly and were more important. In the summer of 1916 it was officially stated that the general increase amounted to 30 per cent., but there are still many districts in which cash wages do not exceed £1 per week, and some in which they had not reached that figure at the end of last year. This increase in rates is not sufficient to meet the rise in prices, but in many cases employment and earnings are more regular than a few years ago, and conditions are better to that extent. From the employers' point of view the increases are considerable as they have mostly been given to men over military age, whilst the most vigorous of the young horsemen or ordinary labourers have gone into the army or to industrial employment. It is now claimed that the action of the Director of National Service has established a minimum wage of 25s. per week for all farm workers who enrol under his scheme, and it is stated that a Government Bill is in preparation to make this minimum general.

Wages of women field workers before the war varied between 1s. and 2s. per day, but were generally about 1s. 6d. The rates now paid vary from 3d. per hour for odd work, to 12s. and up to £1 per week of 48 to 54 hours for weekly work. Up to the end of 1916 some women were still working for 6s. per week. In no district would the average rate amount to more than £1 per week for the time worked, and nowhere, except in Scotland, would the average for the year amount to £1 per week. In many districts the average earnings for the year would vary between £20 and £40 for women who are wholly or mainly self-supporting.

there must be provision for progressive advances similar to the advances made in other industries, otherwise the economic attraction of urban industries will remain. The keen worker and intelligent citizen will be needed in the organisation necessary for making adjustments. Indeed, no system of adjusting rates of wages is likely to be entirely successful which does not involve the interest and action of the most numerous party to the contract. With much regulation and supervision of a police character by public officials it may be possible to enforce a statutory minimum wage in the determination of which the labourer has had no part, but such a system will leave him in the position of a minor in the social world, for whom everything is decided and carried out by superior persons.

The best method of maintaining and adjusting rates of wages would be by an extension of trade union activity in the villages. Prior to the war some extension was taking place, with hopeful results. The National Agricultural Labourers' Union had been growing in numbers and becoming active in several counties, including Lancashire, Cheshire, Northampton, Norfolk, Essex, and Somerset. Other unions also had some branches in rural areas. In Scotland, also, a union of farm workers had been very successful, especially in negotiations. Whatever method of adjusting and supervising rates of wages is adopted, it is essential that it should require personal initiative on the part of the labourer, and this will require some form of mutual association.

Employers in agriculture have long had both formal and informal (mostly informal) agreements to control rates of wages, and to bargain on equal terms the men must prepare group opinions and demands. In this sphere the best of the workers are needed. Obstacles to the development of common action have been enormous: the incomes of the labourers have not been sufficient to provide a surplus for the adequate support of an organisation; the natural leaders of the men—the young, intelligent workers—were mostly drawn to the towns; and the men were isolated, working in small groups, under varying conditions. Prior to the war the growing strength of the union was due largely to the growing interest of young men. If these return to the farms and wages are raised by public action the outlook should be hopeful.

The farmer's interest in the retention of good men on farms ought to be obvious, but it has not always been obvious to the farmer. In large districts in the Midlands and Southern Counties the standard of work on farms has sunk to a very low level, owing to the fact that most farmers held out no incentive to good work on the part of their employees. Almost any young man of the Midlands who has worked for some time in a Northern county will tell of the greater speed and higher standard of work in the North, and most prefer the better class work where wages are adequate to pay for it, even while they feel bound to 'work according to the pay' in the low-wage areas. In the Midland and Southern counties a greater application of intelligence and skill is required, together with provision of more and better implements

and machines as in the North, rather than a much greater demand upon the physical efforts of the worker.

A new standard of knowledge and craft skill will be eminently required if progress is to be made in agriculture, and in the development of such a standard the interest of the nation is as great as that of the farmer. Not only does the nation need more food, but it needs the brighter, keener, rural population that must develop with higher standards of work and better conditions of employment.

There is much danger that it will be difficult to establish new standards of work on farms of the prevailing size, and especially that the workers will not be provided with the machinery and power necessary to increase and improve production without calling for heavier physical exertion. For this reason it is important that workers should consider the advantages of the establishment of larger farms which is being advocated.

There is also some danger that the standard of work, together with the general standard of living in rural districts, may be reduced by the invasion of women's labour. For forty years or more the number of women employed in agriculture has been diminishing, and in most districts this has been regarded by the workers as a sign of social advance. In general, women on farms have been casual workers, and, as rates of wages have been low, the existence of the self-supporting female worker has been a precarious one. The work allotted to them has been of an unskilled and intermittent character, and under the conditions now prevailing* there is a general tendency to give the unskilled work to women.† This work in itself does not offer an

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* 1916.

† Women engaged in Agriculture, 1911.

Farmers and Graziers	20,027
Daughters and Relatives	56,856
Bailiffs and Forewomen	25
Shepherds	6
In charge of cattle	4,934
In charge of horses	—
Ordinary Labourers	8,280
Woodmen	2
Nurserymen, Seedsmen, Florists	1,170
Market Gardeners, including Employees	2,449
Other Gardeners (not domestic)	583
Agricultural Machine Proprietors and Attendants	60
Others	330
Total	94,722

Of these, 70,000 are unmarried, 7,000 are married, and 17,000 are widows. It is now estimated that there are 60,000 additional women employed on the land, and as the ratio of 'ordinary labourers' amongst women ordinarily employed in agriculture is high it is not likely that new employees will be given positions requiring skill or carrying responsibility.

adequate career to women, nor do they frequently develop sufficient skill in field work to open up careers for themselves. A great increase in women field workers would almost inevitably reduce the standard of work. On the other hand, if a woman is to marry and settle down, this field work is not a satisfactory training for housewifery. Nowhere in country districts is the art of the housewife at such a low ebb as in districts in which it is common for women to work in the fields. The effect of unskilled field work on the character and bearing of women may easily be seen in districts in which numbers have been employed. Agriculture, especially progressive agriculture, can offer careers to many women in the lighter branches of skilled work in the dairy industry, market-gardening, fruit-farming, and poultry-keeping; and if rural industries develop alongside progressive agriculture, the factories for making butter and cheese, sugar or starch, etc., should provide openings for them. Without intelligent and energetic women no real development of country life will be possible, but unskilled field work does not develop the type of woman that will be required.

There is also the question of boy labour* and the training of adolescents for skilled and responsible work. The work of many a boy of thirteen years of age on farms is merely that of bootblack, messenger, and general drudge. He is half attached to the kitchen, half attached to the yard, and few of his duties require much skill or intelligence. The age of fourteen years is sufficiently early to begin learning the real work of the farm, and ultimately much better results would be obtained if part-time education could be continued after this age is reached. There are no technical schools for farm workers similar to those in which the town engineer is trained, yet if he is to do skilled work it will make as great demands on general intelligence and special skill as the work of the engineer. In the provisions for agricultural education which will be made after the war, the need of the farm worker must be remembered. Many of the evening technical classes which have been held in country villages have been more or less failures. Teachers were not always the best; the boy had little incentive to study or work because increased skill did not bring increased wages, and his daily work left little available energy for evening study. The technical education of the future will have to be given in the day-time, either whole days during certain seasons, or part-time during the autumn or winter. If they had contact with skilled men on the farms where they were employed, many boys would pick up the rudiments of knowledge and skill, and develop a taste for technical education.

* In 1901 there were nearly 20,000 boys between the ages of 10 and 14 years engaged in agriculture, and in 1911 less than 10,000, or less than half the number at the previous census. The decline in number was especially important among boys of 10 to 13 years of age. This class fell from 3,376 in 1901 to 587 in 1911. But from July, 1914, to July, 1916, some 15,000 boys under normal age had been released from school for farm work, and the number is now probably 20,000. In all there are probably nearly 30,000 boys under 14 years of age employed on farms.

The reasons for the employment of boys under fourteen years have been the demand of farmers for supposed cheap labour and the parents' need of the small earnings. The wages of these young boys did not often exceed 4s. per week, and a small increase in the earnings of adults over the real value of pre-war rates would in most cases compensate for the loss of the £10 or so to which the yearly earnings of the boy amounted.

There are many social problems which also affect the position of the labourer, and perhaps chief amongst these is that of housing. The shortage of cottages or deficiency in quality cannot be separated from the question of economic return from the agricultural industry. Cottages are not built or improved because owners of land who provide cottage equipment cannot build so as to secure the current rate of return on capital invested. Farm rents are often too low to cover the cost of new or better cottage equipment. In some cases, however, cottages have been built as a matter of social duty. Investors in small property do not build or improve cottages for the occupation of farm workers because their rates of wages do not provide a margin sufficient to pay for better housing accommodation. Where the difficulty is one of absolute shortage of cottages, many complaints have been made against the restrictions imposed by local bye-laws; but in the main these local bye-laws are based on fair demands for a standard of housing under modern conditions; and in view of the general complaints as to deficiency in quality it is useless to build cottages which will not meet the fair demands of the labourer and his wife.

The shortage of cottages in rural areas is often the cause of hard conditions, for the labourer who lives in a 'tied' cottage may have to leave his cottage and, it may be, the district, as well as his employment at the end of a short notice. With an adequate supply of free cottages this hardship would be mitigated.

It is difficult to see how farm organisation can be carried out without the residence of some men such as carters and shepherds in cottages attached to the farm; but they should not be penalised in any way because of such residence. They might be granted a little relief by a legal provision that a month's notice should be required for the termination of the tenancy of the cottage, without reference to the notice required to leave employment. This would tend to disorganise the farm occasionally, but it would make the employer considerate with regard to giving notice. It is regrettable that in some districts there is a tendency to attach cottages to farms in excess of the number required for those men who must live near to stock, thus placing the otherwise free cottages under the control of farmers. Nothing robs the labourer of his liberty more than this.

The only satisfactory solution of the rural housing problem will be found in a policy of building houses by local sanitary authorities. So far as possible their schemes should be of a self-supporting character, for subsidisation in the form of provision of cheap capital means a grant in aid of the low wages paid in the industry. In districts in which

large, highly-capitalised farms were established they would probably provide houses for a large number of their employees, but to obviate the possibility of hardship in the case of dismissal or dispute a certain number of free cottages would be required.

On the whole, the economic position of the rural worker depends upon the general conditions prevailing in the industry. While the urban worker is directly interested in the quantity and quality of the produce of the land, the rural worker is more directly interested in the methods by which it is produced and their economic results. It might be possible to double the present production of the land and yet reduce the general standard of living of those engaged in its production. The townsman's interest is to obtain the greatest net production of food per acre after feeding the population engaged in agriculture, thus securing food supplies for himself. The rural worker can always produce enough food for his family, and his main interest is in securing a high rate of production per man, for on that depends the standard of living of himself and his family. As he produces more food than he consumes, he is interested in the maintenance or increase of prices, while the urban worker who is a consumer is concerned that they shall not rise.

The problem of production in agriculture is to increase the quantity without increasing the unit cost of the goods produced. In other words, to get the maximum quantity of food for a given quantity of labour and capital expended. Comparisons have recently been made between the agricultural systems of this country and Germany, apparently to the disadvantage of the British system; but while the German farmer is supposed to feed from 70 to 75 persons and the British farmer only 45 to 50 persons from each 100 acres of cultivated land, the German system requires 18.3 persons and the British system only 5.8 for the cultivation of each 100 acres. Thus each person engaged in British agriculture feeds 7.6 persons, and each person engaged in German agriculture feeds only 3.8 persons. Some modification of this statement is required, because of the large proportion of women employed in German agriculture, but the production *per man* in Germany probably does not amount to more than two-thirds of the production *per man* in this country. The result of this difference is seen in the difference between the rates of wages, for even with a better system of distribution in Germany wages of German agricultural workers are not equal to those paid in Great Britain.*

* A comparison of earnings (including cash wages and extras) of agricultural workers in different countries does not provide for a full comparison of the standards of life of this class in various countries, largely because of possible differences in the use which is made of earnings, and also partly because of some other circumstances outside the employment of the men, such as the amount of work done and wages earned by their wives. But the amount of earnings is the main element in the determination of the standard of life of the working classes, and the following comparison may be given.

(*Note continued on page* 87).

The production of British agriculture could be increased to an enormous extent without reaching the point at which unit cost of goods would be increased. But this will be made possible only by study of the best methods of production and the application of capital, knowledge, and skill in every sphere. Some measures may be necessary to create confidence in the industry, but no artificial measures alone can secure an economic increase in agricultural production. The interest of the rural worker is to obtain a system of production which, while making less demands on mere physical exertion, will increase the return from labour and yet provide him scope for self-expression in the course of his work. This can only be obtained on such farm-units as will admit of vast improvements in the application of machinery to many tasks, the employment of specialised knowledge in spheres of management, and the employment of increased skill in spheres of labour.

But the end of life is not production of goods: it is the production of more and better life. To enable the rural worker to reach this end, vast endeavours will be necessary outside the sphere of his labours. The position of the rural worker in the political sphere, both national and local, is extremely weak. He is apt to be much sought after by persons of all parties during general elections, but because he has no organisation the rural worker cannot enforce demands or claim redemption of promises in the periods intervening between general elections when Parliament is actually at work. In local politics he is a much-administered, passive person, who is at the mercy of locally elected or nominated governors, but more perhaps at the mercy of the salaried officials of local bodies. In such matters as the administration of the Housing Acts, which are of vital interest to him, he has no power. Nor will he obtain power until some kind of voluntary association

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Farm and forest workers in Germany were divided into five classes, the earnings of which, in 1906, were as follows:—

German Empire.

	Proportion to Total Workers. per cent.	Average Annual Earnings.
Class I.	.14	£39—£45
II.	2.50	£33—£39
III.	24.00	£27—£33
IV.	42.00	£21—£27
V.	31.00	£15—£21

The bulk of the male labourers would be included in the third class, large numbers of workers in the lower classes being women and youths.

England and Wales.

Number of Farm Workers, 1901.		Proportion to Total. per cent.	Average Annual Earnings. 1907
Shepherds	25,354	4.16	£50
Cattlemen	81,302	13.36	£49
Horsemen	154,377	25.36	£48
Ordinary Labourers	348,072	57.12	£45

can be formed to provide for representation of his interests. Persons with larger incomes and possessing more leisure cannot afford the time or money necessary to understand the almost endless stream of laws, orders, and regulations supposed to be administered in rural areas; and to enforce consideration of his interest the rural worker will have to provide and pay for representation. Here again the young and intelligent men are wanted to organise the rank and file of the trade union or other voluntary association, and from whom to select and train representatives.

In a wider social sphere, also, there is much to be done to make rural life bright and congenial to the men with intellectual and social interests. A large amount could be done through the village schools if we could develop a philosophy of rural life similar to those developing in other countries in which the rural workers form a much larger proportion of the total population. The village clubs and recreation grounds must also grow in numbers and importance. Many villagers will soon find their own forms of recreation when leisure and a little surplus income are available, but there is some danger that they may follow the rather thin commercial amusements of the towns.

The urban worker can do much to assist the rural worker in the matters of association and education, upon which the improvement of rural social life depends, but he will first have to get a much better conception of the character of the rural worker than that which is now common. Ever since Edwin Markham wrote *The Man with the Hoe* it has become quite common to regard the agricultural labourer less as a man than as a creature or a thing. This attitude is often found in literature, even in literature circulating amongst industrial workers, and seems to be quite commonly accepted. According to this idea the agricultural labourer is a thing with a 'bowed back,' and 'empty face,' a 'loose and brutal jaw,' a 'slanting brow,' and a 'stunned and stolid mind,' 'Brother to the ox.'

"A thing that grieves not and that never hopes."

His name is 'Hodge,' with all its implications in common parlance. There is only one other class in industrial life to which a name is so commonly and closely applied, and that is the merchant-seamen. But 'Jack' is a name honourable in its implications, not derogatory as in the case of 'Hodge.' To find a real analogy for the common denomination of the farm worker we should have to go back to the days previous to the Plimsoll agitation and the Seamen's Union, when the merchant-seaman was known as 'Poor Jack.' In recent years there has been only one analogy to the name of 'Hodge,' and that was 'Tommy Atkins' in the days when the army was largely recruited from the misfits of the industrial world.

To those of us who have worked and lived with the agricultural labourer the current idea of him and the name were only significant of the blindness of those who held or used them. We might be often disappointed by his industrial or political weakness, but we had only to remember the obstacles he had to encounter, and the small proportion

of the industrial community who take a keen interest in social movements even with greater opportunities, to understand and forgive.

Those who meet the rural worker personally know well, sometimes to their cost, that he is independent and tenacious of the rights he has been used to exercise, and quick to a high degree to discern rights or privileges he may exercise. Mr. J. F. Duncan, the secretary of the Scottish Farm Servants' Union, who has been used to a better paid class of farm labour, says the farm worker of England "is certainly not the dull, spiritless creature which imaginative writers have always presented to us as the typical 'Hodge' of England." The rural worker differs from the urban worker chiefly, if not wholly, in the external circumstances that he has no trade or class organisation through which he can express his feeling of industrial or political grievance or voice his industrial or political aspirations, that his facilities for education have been poorer, that his work does not bring him into contact with so many people and thus stimulate mental intercourse and imagination, and that his opportunities for social intercourse have been more confined. These circumstances can be changed and the rural worker fitted to exercise the power his numbers entitle him to, both in the industrial and political world. The urban worker can give him much assistance towards this end. But the first need is a development of industrial conditions which will provide him an adequate income and some leisure wherewith to improve the higher personal and social phases of the life of his family.

In speaking on his paper, Mr. Ashby said that the industrial workers present might think that the interests of industrial workers and rural workers in agricultural questions were identical; and under some circumstances this was the case. When a question arose as to the absolute supply of food their interests, as consumers, were identical; but when the question of methods of production arose, the industrialists were concerned only as consumers, while agricultural workers were concerned as producers, and as they produced more than sufficient to support their families, and their financial interests depended upon the surplus of production, interests at once diverged.

At the present moment we had a population of 46,000,000 and a cultivated area of 46,000,000 acres. It might be possible to extend that area a little, but even so it would work out to barely 1¼ acres per person. Were we, as a nation, to try to be self-supporting on the basis of one acre or 1¼ acres per person, it was probable that the dieting of the people would be much less rich and varied than at present. One question the industrial workers would have to settle, because of their political power, was whether we should try to sustain the population on this basis, regardless of cost or the result on dieting, or whether we should develop our farming on economical lines without attempting to stimulate production by means of tariffs or subsidies. This was why a number of people advocated large farms. The large farm,

with the benefit of plenty of capital and brains, could produce more per acre than was produced at the present time, and, what was more important so far as the producer was concerned, could secure greater net output per man; for on that standard depended the standard of living for the rural worker.

To attain these objects we needed larger holdings, but the policy of the large farm system did not mean what is called extensive cultivation. Cultivation on the large farm of 1,000, 5,000, or 10,000 acres could be just as intensive, almost as productive per acre, as on the small existing farms, or even small holdings. But there was this important difference—the cost of production was not so great. The agricultural labourer could not secure more responsibility in his work or more payment for skill or knowledge on the little farm: he could not do this even if the whole country were cut up into small holdings for his benefit. But he could do it if the present system of hereditary capital and management were broken down, to let in the man who was a trained agriculturist and to develop the commercial side of agriculture so that capital—whether from the State or through the Banks—could be invested in the industry.

QUESTIONS.

Question: What is the cause of the difference in the production per individual in Great Britain and Germany?

Answer: One reason for the difference in production per man is the fact that the average size of British farms is far greater than the average size of German ones; and I think you will find that with small farms you have low production per man, partly because it is almost impossible to apply machinery, at any rate, so economically on a small as on a large unit.

Question: The lecturer tried to point out that the large farms produced more than allotments or small holdings. I don't think they do. Does Mr. Ashby find that the large farmer produces more than the allotment holder or small holder? The ordinary average earnings of the ordinary labourer in 1907 for England and Wales were £45 per year, he says: how does he get that amount?

Answer: If you take small holdings of 5 to 10 acres on fairly good soil near a town, and then a farm 20 miles away from a town, you can prove that the small holding produces five times the value, per acre, of the big farm, but the system of farming and the possibility of production are absolutely different. If you wish to compare production you must take small holdings and large holdings producing the same commodities. It would be difficult to prove that the small holders on the whole produce very much more per acre than the big farmers, especially if you make a fair comparison. The market garden holding has been

the best type of small holding, but it seems that the limit in the creation of these holdings has almost been reached. Now, apart from this year, there is occasionally a glut of vegetables, and usually the supply is quite equal to the demand. If you multiply that class of holding you will get a glut and lose a lot of money. The figure of £45 is arrived at by multiplying 17s. 6d. by 52 weeks—*i.e.*, the average weekly wages given in the Board of Trade return of wages in agriculture in 1907. The figure covers earnings—*i.e.*, wages and all perquisites.

Question: Do I understand that it required 18 persons in Germany to do the work five were doing in the British Isles, and that it took 100 acres to feed 70 Germans, and the same area to feed 40 Britishers?

Answer: The difference, in part, is due to the fact that there is a much larger proportion of women employed in German agriculture; and, further, that there is an enormous proportion of small farms there, on which practically all the cultivation is done by manual labour.

Question: Can the lecturer give us any information as to the relative productivity in America? Are the big farms more developed there?

Answer: I would not compare the American system with our own. In some States they have barely got beyond the process of exhaustion of the virgin soil. If you take the whole of the States, the productivity per acre would not be anything like the same as ours.

Question: How does Mr. Ashby come to the conclusion that large farms will be beneficial to the agricultural labourer?

Answer: It is quite certain that where you get the poorest form of management and the lowest capitalisation, there you get the lowest paid and the lowest type of worker. Wherever you get commercial stimulus in agriculture, as in the Eastern Counties and North-west Lancashire, there you get the most highly paid workman and the best type.

DISCUSSION.

MR. T. MACKLEY (National Union of Agricultural Labourers):—

I am an agricultural labourer by profession, as I left school at nine years of age to go on the land, and what I have learnt in the way of education since has been by the help of such institutions as Ruskin College. At one time I was thrown out of work, with a widowed mother and sister to keep, and I took the place of a town working man quite in ignorance that I was competing with him and cutting down his wages: that is why I took up the work of organising agricultural labour. In last week's *Railway Review* there is a very fine cartoon where the agricultural labourer is telling the railway worker that his

place is now at the bottom of the form—he now has a minimum wage above that of the railway worker. Claud Hamilton's boast used to be that the G.E.R. could always get men for the railways at 1s. a week more than they could earn on the land: we are not now going to allow him to use the agricultural labourer to make profits for the railways.

It may interest you to hear a little of the Norfolk Movement, as we call it to-day. In Norfolk there are now 10,000 members of our Union, and I think we shall get the wages to 30s. instead of 25s. in that district. If you want work on the land there, you now have to produce your Trade Union card before you get it. That has been brought about in four years. We at first asked for 2s. a week increase; the farmers would not listen, but we said we would take 1s. and ask for more. We asked for more later, and got 2s. Then we wanted the farmers to meet us—and remember that in Norfolk you have the strongest Farmers' Federation in England, both financially and in membership. They would not meet us, and they organised a blackleg system to stop us from bringing the men on a particular farm out on strike; perhaps there were men in Bradford who were receiving 5s. a week from the Norfolk Farmers' Federation to be ready at their beck and call—but again we spiked their guns. We asked the men to a conference of every branch of the Union, and asked for power to demand more wages—not how much, but more—and then asked the Farmers' Federation to meet us and settle the matter as amicably as possible. They would not listen to this—we were paid agitators, creating discord and discontent among the working classes! The men agreed to put in their notices, and—like the Boers in the Boer war—we adopted guerrilla tactics. We put the notices in on one farm and left the next one, and so on. One farmer, who had received 43 notices, asked one man what he had sent in that scrap of paper for, and the man told him he had argued with him for nearly 40 years on the question of wages and hours, but was always talked over, and that he was now employing a man who knew more about it than himself. Every man of the 43 told him the same thing—every one of the 1,000 men referred the masters to the head office! After a conference of more than two hours we obtained 3s. After this we got the Federation to meet us again, and agree to £1 a week, and they further agreed that any federated farmer who did not pay £1 a week would not get help with the blacklegs. We got wages to 22s., and now we are asking for 30s.; and there is not a man in Norfolk who belongs to our Union who says that 30s. is the final. We want a real living wage for the agricultural labourer, and I will say that the Government's proposal for 25s. a week is a mere misleading term. It includes all the perquisites—house, rent, etc. If we get the 25s. without any stipulation, it means that the farmer can go to the labourer who is getting 24s. a week, give him the 25s. and charge him 2s. 6d. a week for rent, which will be 1s. 6d. a week knocked off. I have heard what Mr. Ashby says, that the English labourer produces £90 per annum; but up against that is the evidence of the Duke of Marlborough—at any rate he is not an agricultural

labourer—who said in the House of Lords that any agricultural labourer was worth £250 a year ; and one of our friends—an agricultural labourer —put this very nicely into verse :

From early morn till late at night
We work at arduous toil ;
We plough and sow, and reap and mow,
To earn wealth from the soil.

We're told—in spite of all we do—
Our labour does not pay ;
So we must work for sweated wage—
Our masters always say.

" When thieves fall out," the honest man
Sometimes gets back his own ;
When labour's scarce, and truth leaks out,
Some startling facts are shown.

A noble duke now says we're " worth
" Two hundred and fifty pounds
" A year " as workers on the land—
How grand such figures sounds.

This works out at FIVE POUNDS A WEEK,
'Tis true ; but yet we're poor—
We have to be content with ONE,
Whilst someone else takes FOUR.

This unfair distribution means :
The wealth we workers earn
Oft gives the power to other men
To make us poor folk mourn.

It seems to me a better way
Would be for all who delves
To hand the idler just ONE POUND,
And keep FOUR for ourselves.

The way such can be done is plain :
Each labourer must unite
In one great Union—firm, and strong,
And ready for the fight.

Then, brother, come ! fall into line
To fight 'gainst being poor.
Come on ! increase that POUND a week
Until it gets to FOUR.

As to conditions. There are very few industrial workers who have given five minutes' consideration to the rural problem of this country. Can you imagine going to work on Monday morning—I won't say for how many hours, but something like the tramwayman under the old system, whose little boy asked the mother when he went home to dinner on Sunday who that strange man was? With agricultural labourers living in tied cottages, the work is never done from Monday morning till Sunday night; there is no opportunity of standardising hours as well as wages. There are men at the present moment who actually work 108 hours a week for a wage of something like 17s. I was in a village only last week on the borders of Yorkshire, where they are actually receiving 16s. a week, with 4d. deducted for stamp licking! If you want to know the real condition of the agricultural labourer, here is an exact copy of a letter I had handed to me one night, when I was about to speak at a meeting. A woman came into the room, and handed me this: "Dear Sir. I am sending you a line of how eight in family is kept on 16s. a week and 1s. for Sunday work—no potatoes. The farmer reckons to pay £1 a week, but keeps back 3s. for house rent—(you will notice we never get behind with our rent!). Where are all our clothing, boots, and club money coming from? P.S.—Excuse me not giving name and address, as I am afraid if my husband's boss got to know I had written this he would give him the sack and turn us all out of doors." Have you ever been in that position, when you have to choose between being a man, or a crawling thing at the foot of another man because you could not see your wife and children suffer? If God ever intended a man to be in that position there is no just God in this country. The woman gives a list of things she has to purchase in the week for 17s., and it comes to 17s. 10d.—and then I learned for the first time in my life that you could get 17s. 10d. out of 17s. I often wondered how my wife managed when I was out of work fifteen months because I joined a Trade Union: now I know something of how it is done.

Mr. Ashby spoke about the need for the standardisation of working conditions. In Norfolk alone we have about fifteen different working systems. We want one set of terms and conditions, just as we have now one set wage. When first I took up a post in this Union, in 1913, the men's wages in south-west Norfolk were 9s. 6d. and 10s. 6d. a week at the outside; in the north-west they were slightly higher. We now have them everywhere at 25s. a week, and I expected a wire this afternoon saying what the Government has decided in an arbitration case on the question of a 30s. minimum.

There is just one other point. I often get up against my Trade Union friends because I insist that the agricultural labourer—perhaps above all men—is a skilled man. Whether the farmer can afford to pay high wages remains to be seen. I have a balance sheet of a farmer before the war, which shows that for every £1 he paid in wages he put in his own pocket £4 1s. 10d., after all deductions—rent and other things—had been reckoned off. One other

instance, of a farmer (who told me this himself), regarding last year's potatoes: "I had 48 acres of potatoes; I sold 308 tons at £11 a ton for eating purposes, and 50 tons at £12 10s. for seed potatoes—a total sum of £4,013. The total cost in rent, labour (both horse and manual), seed and manure, came to £1,300, leaving a net profit of £2,713. And *you* are paying for that to-day! But we say: Pay the labourer who does the work—surely he has the right to more than he is getting, to enable him to approach to a Christian life. We want a living wage, the abolition of all the different standards of hours of work; and we want you to realise that you can do much to help us, for—

Down the ages men have struggled
  Some have fallen in the strife;
Yet step by step they mounted upwards,
  That we, their children, might have life.
Then let us carry on that struggle,
  Till it may be truly said
Men and women, little children,
  Are assured their daily bread.

Mr. Jesse Argyle (Working Men's Club and Institute Union): My sympathies are entirely with the agricultural labourer in this struggle. No class has been more hardly dealt with in the country, and I think the remedy for their position will have to be found in the proper organisation and development of the industry, and on trade union lines, and not in the expansion of small holdings. Mr. Ashby said there were about half a million employed in agriculture, and the idea of giving each a small holding, and at least 25 acres, was absurd. In addition there are also about 270,000 farmers and their relatives getting a living out of the land, and if we take away their land we must at least leave them small holdings for themselves. I agree as to the hard work and poor living for small holders, as I have experienced some of it. In my early youth I spent a few years with an uncle who was in a way a small holder, and my scanty school hours were robbed to hoe, dig potatoes, look after the pony and the pigs, and other like jobs; and in order to make up a living we had also a stall in the market. Probably the reason why rural workers put up with the long hours and hard living is because to some extent there is no inducement in country life for anything else. There is practically nothing else to do but work and sleep, possibly varied by a visit to the tap room when there is sixpence to spend. In addition to giving good wages, we have to make their lives more attractive, and to try to take away the dreary dulness and monotony.

Mr. A. G. Carter (Coventry Trades Council): Owing to the tied cottage system the agricultural labourer—especially where the Union is unable to collect enough men to form a branch—is absolutely in the hands of the farming class. I have a particular instance in mind where a man voted at the last election against the wishes of the farmer;

the farmer somehow got to know, and the next Saturday he was given a month's notice, and told he must vacate his house at the end of that time. No reasons were given, but undoubtedly they were political. The tied cottage system is to a great extent responsible for the very low pay of the agricultural labourer. Organised workers in towns have not been wholehearted in this matter. We have to realise that the agricultural labourer's 'battle' is the town worker's as well, and that the farm labourer is much more important to the community as a whole than a large percentage of the people who are getting their living in the towns and cities. Skilled unions ought to place funds at the disposal of the farm labourers' Trade Unions. By doing this we should be bettering their status and doing good work for ourselves also. As to the question of small or large holdings: I am familiar with small market garden holdings round Evesham and Cheltenham, and no one could argue that these holdings produce anything like so much as the large market garden holdings; the larger holdings are cultivated more scientifically, hence the produce per acre is better than on small holdings. I am sure this also applies to farms. The man who farms 1,000 acres is much better able to bring in modern appliances than the man who farms only 100 acres.

Mr. G. Ballantine (London Society of Compositors): It has been suggested that on large farms, by co-ordination of work and methods, production would be more largely increased than is possible in smaller enterprises: that may be true, but it would be possible to adopt the same system of working with small concerns, controlled under a co-operative system, with the same machinery, the same industrial conditions, and the same factors that are applied in larger concerns, thus devoting the benefits to a greater number of people.

Mr. Ashby's Reply.

I think the point is we want something practical. When allotments and small holdings were first instituted, more especially when the Allotments Acts were passed in 1883 and 1886, they were absolutely necessary to enable the labourer to maintain a family. The position was something like that of a weaver who went to a mill, worked ten hours, and came home to work another four or six hours on a hand loom. That was the position of the farm worker cultivating an allotment in the 80's and early 90's. Mr. Mackley will agree that there ought to be no necessity for allotment cultivation through sheer economic pressure. I believe there is scope for an extension of small holdings under the Small Holdings Act. I would be very glad not only to see some improvement in that Act but improvement in the local administration of it. But small holdings do not provide for the general problem of the position of the farm labourer, and in regard to this something ought to be done immediately. To deal with the tied cottage, we may possibly get some legal measure which would provide that, in every case, a man should have a month's notice to

leave his cottage whether the notice needed for terminating his employment is a week or a month. That would at least give him a little respite ; but the chief thing is to build more free cottages, not belonging to the owner or the farmer, but to some public body. The main reason why more of these cottages have not been built by public bodies is that wages are not high enough to pay economic rents, and they would not saddle the ratepayers with the responsibility—and rightly, too, I think. If you do saddle the nation with capital expenditure to maintain farm cottages, you are subsidising low wages in agriculture. If you want to do this, do so ; but the best way is to improve matters on the side of wages first, and then, if the private investor does not come along to build cottages, let the public bodies set to work and build some. Trade union organisation at the present time is all-important. I agree that it is very much better to have farm workers in an organisation of their own than in a number of organisations, although if the other unions like to get to work and organise farm labourers in their own districts, I would not say a word against it. The problem is urgent, and should be worked at in some way. The best plan is to have a Craft Union for these workers, and perhaps the best method would be for industrial workers to provide them with money to begin with ; but far more important than money is some intelligent study of the position, and a good deal of voluntary work in the way of organisation. As soon as the minimum wage has been established one or two years, the farm worker will be in a position to pay a decent weekly subscription that will maintain the finances of his own union : up to the present he has not been able to do this. There you have the beginning of the solution of the problem for the farm worker. After that, there is an enormous amount of work to do, as suggested by Mr. Argyle—*e.g.*, the development of the village club or reading room, and the development of education for adults in the villages ; but, before you get to that, the establishment of village public education at least on the same standard as that now existing in the towns, the raising of the school age from 13 to 14 years, extending if possible half-time education after 14, both to develop the personality of the children and to develop craft skill. Along that line lies the regeneration of English village life.

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